Clinical Lecture

ON

CHRONIC ENLARGEMENT OF THE TESTICLE.

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WE have had lately, gentlemen, a large number of cases of chronic disease of the testicle; in fact, at the present moment we have three such cases in the wards, and I therefore take the opportunity of saying something on the subject.

In the first place with regard to the diagnosis; when you get a large scrotum before you, the first thing is to examine it carefully and see whether it is simply an enlarged testicle or whether there is anything else. You will therefore follow the rule, which I have so often impressed upon you, to examine the spermatic cord and see whether there is anything more than the cord protruding from the abdomen—whether, in fact, there is not a hernial protrusion. If there is nothing of that kind, and if the tumour is clearly in the scrotum, you will then proceed to examine the cord a little more critically, with the view of making out what is the exact condition of the vas deferens, because it is as well to ascertain that before you proceed to examine the testicle at all. If you find the vas deferens enlarged, then comes the question, Is that an enlargement which has spread from the urethra downwards to the testicle, or is it an enlargement spreading upwards from the testicle towards the body? A good deal will depend upon the history of the case. If you find that the individual has had acute epididymitis, generally following upon gonorrhœa or, at all events, some urethral irritation, which has subsided and has left a thickening of the cord behind it, the case is pretty obvious. You would expect to find, when you examine the testicle, that a thickened vas deferens leads down to an enlarged epididymis; and that is a very common condition of things, but one which is often misunderstood, because it is not remembered that the disease spreads from the urethra downwards to the testicle in a great many cases. You may not have seen the case in the acute stage, but there is the chronic thickening left; and pray remember that there are plenty of cases of urethral irritation, stricture, or what not, where there is an enlargement of the vas deferens spreading down to the epididymis and causing its enlargement.

In such a case it is of no use treating the symptoms; what you have to do is to treat the cause, to put the urethra in a healthy condition, and the testicle will almost take care of itself. But sometimes it does not, and then you have to treat the testicle. These cases of chronic enlargement of the testicle due to local causes are comparatively easy to treat. You can strap the testicle carefully or rub in a little mercurial ointment, or in very obstinate cases, and particularly where the body of the testicle has already become enlarged, you may find it necessary to give a course of mercury before you clear up the effusion which has taken place in the testicle itself. It is an inflammatory effusion between the tubes of the testicle due to inflammation spreading down along the vas deferens, and of course, if it has gone on for any length of time, it may become to a certain extent organised, and it will never entirely clear up. Still, no harm comes of it; it remains there very much *in statu quo;* and if you get the urethra into a healthy state, the testicle will probably give the patient no trouble. But the condition is very different when we find the cord very much thickened and we trace it down and find that the epididymis is evidently the primary seat of disease. Of that we have examples at the present moment in the ward.

There is a young fellow, whom I will show you presently, who has a beautiful example of a single nodule of tubercle in the epididymis. There are also two patients whose testicles I have removed, and they are good examples of a much more advanced disease of the epididymis spreading up eventually to the body. You will remember that in each case—both patients are still in the ward—I have removed the more seriously diseased testicle; but there is, unfortunately, another testicle left which is also diseased, and with which I have dealt in a manner that I will explain presently.

Tubercle of the testicle is a disease which appears in the epididymis, and which tends to spread in both directions, upwards along the vas deferens, and forwards to the body of the testicle, and will lead eventually to the disorganisation of the body of the testicle. It is, of course, a deposit of tubercle in a patient who has a tendency to that disease, and it is a disputed point whether the mischief begins in the intertubular or in the intratubular structures. I myself believe that it is within the tubes that the disease begins, and I think the proof of it is how readily it spreads from the tubes up the vas deferens and in the opposite direction along the tubuli seminiferi from the globus major to the body of the testicle, and affects all parts of the organ. However, it is a disputed point, and it is not necessary to labour it; but I think that clinical evidence is distinctly in favour of the mischief beginning within the tubes. No one doubts that it begins in the epididymis first, and, as I say, it spreads both ways. In one of the testicles which I removed, and which I show you, we have an example of disease developing in the epididymis and running on to abscesses; but you will see that the body of the testicle is still perfectly healthy, whereas in this other testicle, so far from the body being healthy, the greater part of it is outside the skin altogether, forming what we call a benign fungus or hernia testis.

This disease beginning in a patient with a tendency to tubercle is very often not recognised until there are distinct knots in the epididymis. The patient has no pain, and does not particularly notice it until his attention is accidentally called to it, and then he consults his medical man. In the early stage of the disease, such as in the young man I have mentioned, I think there is no doubt that, under very favourable circumstances, absorption may take place; the whole thing may clear up, and the testicle be practically restored to a healthy condition. But you require exceedingly healthy conditions for that. A hospital, I need hardly say, is not the very best place for these cases, and the patients cannot from their pecuniary position take every advantage with regard to their health. But when you have patients of the better class, and you find that a young fellow has one nodule in his testicle, or perhaps two, the proper line of treatment is to send him for a voyage—I mean a voyage to the Antipodes, to Australia, and in a sailing ship. He should be put under the most favourable circumstances as regards hygienic arrangements—I mean the thing should not be done cheaply, but he should go in a good ship, where he will have a good berth and plenty of good food. You may then find that after he has been away six or eight months he will come back, and the nodule may have disappeared. If you get a patient under circumstances which do not admit of such treatment as that, what is the best thing to be done? It may be said that the best thing would be to remove the testicle. But then you will find that people do not like having their testicles removed, and it is rather a severe operation for a disease which certainly at the moment only affects a very small portion of the organ. I propose, therefore, in the case of this lad, next Wednesday to cut down upon the nodule in his epididymis and scoop it out very much in the same way as you saw me the other day treat the opposite testicles to both of these, in the two patients who are still in the ward. I removed the worst testicle in both cases and scooped out the nodules of tubercle in the better one, and fortunately this youth has only one testicle affected. But then you may say, "Surely the damage done to his epididymis will prevent that testicle being of much service afterwards." Very likely it may; still there is something satisfactory in keeping a portion of the testicle. An individual is not emasculated, although his testicle may not be of very much use to him, if he has a portion of the body of the testicle left. I will not say that he is capable of propagating his species with that testicle, and perhaps it is as well that he should not; still, he has the feelings of a man, and, as I say, he is not emasculated. There is another advantage that he gets from scooping out the mass in the epididymis: that any secretion taking place in the body of the testicle will find a vent either through the natural tube, or it may be through a small sinus. That is a point of importance, because patients who have nodules in the epididymis blocking it up completely get an uncomfortable feeling of fulness about the testicle, due no doubt to secretion going on in the body of the testicle and not being able to find its

way out. The testicle is apt to get enlarged, swollen, and distended with seminal fluid, and unless there is a vent for it the patient suffers a great deal.

Then, supposing that we have a case more advanced than that. Let me remind you that the disease spreads up the vas deferens, and that in cases where you have abscesses forming in the epididymis the tendency of the disease is to spread up along the cord towards the urino-genital organs, especially towards the neck of the bladder, and to form one or two nodules in the prostate, to invade the vesiculæ seminales, eventually, in the later stages, leading to most painful ulceration about the neck of the bladder. Let me remind you of the case of a man we had here from South Wales at the beginning of the session. He had both testicles even more advanced in disease than these are. On examining the rectum with the finger, I found he had most extensive disease about the neck of the bladder. The prostate was diseased and the vesiculæ seminales, and altogether the man was in such a low condition that I refused to operate on him, and sent him home again. I am quite sure I did right. If I had done anything for that man probably he would have died, but now he will go home and die among his friends, instead of dying here as the direct result of an operation.

Here is the testicle of the man in whom I did interfere. This testicle was practically disorganised. Let me remind you that the opposite testicle had a large mass in the epididymis, and I ventured to treat that by cutting down through the opening made for castration upon the epididymis and scooping out all the disease I could find. He has done very well, except that he had an abscess in his inguinal canal, I have no doubt from the height at which I tied the cord. That I opened last week, and the patient is now doing exceedingly well, and seems likely to make a good recovery. This is a good example of the disease creeping up the cord without affecting the body of the testicle at all, for I may point out to you again that the body of the testicle is perfectly healthy. Here we have a specimen from the last case, which I operated upon last Wednesday, with another condition of things. This man had disease spreading up the cord, for the vas deferens is enormously thickened; but unfortunately he had the disease creeping forward in the body of the testicle, setting up suppuration and leading to the destruction of the tunics, and eventually to protrusion of this mass, which is made up of the seminal tubes, together with some granulation tissue. Let me point out how completely the whole body of the testicle is outside the skin, forming this fungus, whilst behind we have really nothing more than the epididymis. Now, under those circumstances, there could be no question about removing it. I removed this testicle, and I dealt with the opposite testicle in exactly the same way that I dealt with the former one—namely, I cut down upon the epididymis and scooped out all the disease I could find there. That patient also is doing well, but unfortunately he has some enlargement about his prostate and vesiculæ, though not so advanced but that I thought I should be justified in doing the best I could. I am afraid I have not cured him, though I am sure I have given him relief, and he may tide on for some considerable time.

Now let us follow in imagination what will be the outcome of these cases. Very probably they will each have a fistula left in the scrotum. That is a very small matter, and can be treated by injections if you like, but I do not know that there is any very great object in troubling about it. But I am afraid there is in one of these cases already disease about the prostate and vesiculæ which will steadily make progress, and probably before many months are over the patient will complain of a good deal of pain when he micturates, and he may have great frequency of micturition, and the two things together will wear the patient out. It is one of the most trying conditions a patient can be in to have tubercular disease about the neck of the bladder, which leads eventually to ulceration of the mucous membrane of the bladder. In fact, the two diseases go on together; and sometimes perforation takes place, and then we have in addition the annoyance of a urinary fistula. At other times that does not take place, and the patient goes on until he is worn out by the constant suffering.

I need hardly say that in a case of advanced tubercular testis you would find other organs almost certainly involved. Now, this man from whom I removed the fungus testis is a man of forty. Since the operation he has spat some blood, and we knew that he had some consolidation of the apex of his lung. Very possibly the disease in the lung may make more rapid progress than the disease in the testicle, and he may die from the disease in his lung, which perhaps will be the more merciful death of the two. Still, I think we give him relief for the time, and we get rid of a certain amount of disease; and supposing that had been the only disease, we should have had the great advantage that we should have got rid of the nidus of tubercle before it became generalised through the system. You see in the bottles here specimens of tubercular testis which show extremely well, because they have been injected with fine injection. The injection does not run into the tubercular masses, therefore the contrast between the red injection and the yellow tubercle is well seen.

To come to another subject, and that is the syphilitic testicle. Of late years syphilis has been found to have a much more important bearing upon disease of the testicle than used to be supposed. If you read the older books, you will find that a great many of the cases which are put down as chronic orchitis are clearly from the history of the cases syphilitic disease. It is only comparatively recently that the two forms of syphilitic disease have been recognised. There is the secondary and there is the tertiary. The secondary form is one of the later manifestations of secondary syphilis; so that when the eruption on the patient's skin has died away, and he fancies himself quite well, he notices that both his testicles are beginning to enlarge. When I say both, possibly one may have a little start of the other, but it is common to find both of them enlarged. You find that the enlargement is very general, and that it clearly begins in the body, and you have a uniform enlargement obscuring and hiding the epididymis completely. When you feel the cord you find it is quite healthy, and there is no mischief spreading up it. The disease is entirely confined to the body of the testicle, and not infrequently is complicated by a small hydrocele. Now, pray remember, when you get a patient before you with a large scrotum, and you find there is distinctly fluid there, that there may be something more behind. It may be a case of pure hydrocele, or it may be what is termed a "hydro-sarcocele," and these hydro-sarcoceles are almost invariably syphilitic. If there is any amount of fluid it is well to tap the hydrocele at once, in order that you may be able to examine the testicle more readily. You will find then, as I have said, that there is a uniform enlargement of the body of the testicle, and that the epididymis is not affected, or is so rarely affected in syphilis that you may practically ignore it.

These cases are remarkable for having completely lost that peculiar testicular feeling, as it is called, which is characteristic of the healthy organ. If you take a healthy testicle and squeeze the body of it, the patient will naturally feel an uncomfortable sensation, which we are all familiar with if we happen to give our testicles an accidental squeeze. But the patients with these large testicles have no sensation whatever. You may handle them or do anything you like, and the uniform absence of testicular feeling is very remarkable. On investigation you will always find that some two or three years before the patient has had syphilis. Very likely he was properly treated, but still there is a remnant of it hanging behind; and you must make up your mind that you will not cure that form of testicle without mercury. It is of no use to give iodide of potassium alone; you must combine it with mercury, but I think the best plan is to give the mercury in the form of bichloride. At the same time, you may let the patient rub in some mercurial ointment by wearing a scrotal bag and smearing the scrotum with mercurial ointment. Some of these patients, although they have no testicular feeling, have a great deal of tenderness about the testicle, with a sense of weight or dragging, which may be relieved by combining belladonna ointment with the mercurial ointment. There are no cases more satisfactory for treatment than these purely syphilitic testicles. You may be sure that you will cure the patient—that is to say, you will bring the testicle down to about its normal size. But I cannot say that you will be equally sure of restoring the function of the organs, because it may happen that this inflammatory deposit between the tubules may have gone to such an extent that it has become organised into a low form of fibrous tissue; and although you will clear away by means of the mercury all the recent deposit, you may not be able quite to clear up the whole of the fibrous tissue, and that has a tendency to contract and produce atrophy of the testicles afterwards. You will find in the older books that the authors speak there of fibrous disease of the testicle.

But then surgeons did not recognise that that was simply a late stage of syphilis; and there is no doubt that if the deposit has had time to thoroughly organise, the pressure may be sufficient to destroy the tubules, and practically the testicle will be lost. That is the form of syphilis which it is most important to distinguish from new growth; for a youngish man may come before you with a large testicle, and it may be a case of sarcoma, and it is not at all easy always to be sure which disease it is. A good deal will depend upon the history. If there is a distinct history of syphilis, you may, at all events for the time being, give the patient the benefit of the doubt, and hope that it is syphilis, which you may clear up by mercury. If you are in doubt, it is better, unless the tumour is rapidly growing, thereby showing its malignant nature, to give the patient a course of mercury than to remove his testicle unnecessarily. But of course if you have a rapidly growing tumour of the testicle, the sooner you remove it the better—there is no question about that; whether it is sarcoma or carcinoma, it is better for the patient that it should be taken out.

Then supposing we have a later stage of syphilis. Of course in the later stages we have what is familiarly known as gummatous deposit—that lowly organised form of deposit that we find so common in various organs, and particularly those which are vascular. If you think for a moment how vascular the testicle is, you can easily understand how we may have large gummatous deposits in the organ. Here is an example. It is an injected testicle, but the injection has not run very well, and you can see above and below a large mass of yellow tissue which is a syphilitic deposit. Here also is a good example of a large gumma filling up the body of the testicle in two sections, one above the other. This occurs, of course, very much later on in syphilis. You find that the patient has been in good health and getting on perhaps in life, but his health breaks down a little, and he begins to show manifestations of tertiary syphilis in various organs. That is one way in which it occurs, but you may have it quite at the other extreme of life—in children. A syphilitic child will sometimes develop a gumma in the testicle which is apt to be mistaken for malignant disease, because we know that malignant disease also occurs in quite young children, and it is very difficult sometimes to be sure which it is. The tendency of a gumma in the testicle, like a gumma in the tongue or anywhere else, is to break down. You may only see the patient when the gumma has broken down, presenting very much the appearance of an abscess, and involving the skin; or if you see it late enough, the skin may be already open and presenting the characteristic yellow slough which we see so commonly in connexion with gummata. We had a good example of it here last summer. I do not know whether you remember it, but I remember the man extremely well. He had double syphilitic disease of the testicle and a sinus and discharge from the gumma in one testicle. The whole thing cleared up under the influence of large doses of iodide of potassium, and he was here the other day perfectly well.

Now, given a case where you have reason to think it is a gummatous deposit, there can be no question as regards treatment. But it is not always easy to be quite sure. I may say at once that I had a patient here some few months ago in a private ward, who had a tumour of the testicle and also a tumour of the arm. He came to my house first, and showed me his testicle, which I thought was syphilitic. I quite made up my mind, and wrote in my notes that it was syphilitic, but just as he was going away he showed me his arm. It looked so like a sarcomatous growth upon his arm that I was shaken in my opinion, and rather came to the conclusion that it was a sarcomatous disease of the testicle, and that he had a secondary sarcoma forming on his arm. He was a very intelligent man, and utterly denied anything like syphilis. He acknowledged that he had had some venereal troubles many years before, but utterly denied that he had ever had anything like syphilis. I took him into a private ward in the hospital, and advised him to have the testicle removed, and there could not have been a more typical gumma of the testicle than there was in that case. It was so good that I took it to the College of Surgeons to be mounted in a bottle, in order that we might have a well-marked undoubted specimen of gumma of the testicle to examine upon. The moment I found the patient had gumma of the testicle, of course it was quite clear what ought to be done for his arm. I put him on full doses of iodide of potassium, and the whole gumma cleared up, and I know that he is now in perfect health. I do not think he was much harmed by losing one testicle. It was a damaged testicle, and most likely it would have shrunk up and become merely a nodule; for this disease of the testicle when it shrinks up is apt to lead to extreme atrophy.

This brings me to say a word about sarcoma, though we do not happen to have had a case very lately of sarcoma of the testicle. Until late years sarcoma was not differentiated from carcinoma, and therefore all the older cases of sarcoma are put down as cases of carcinoma. Sarcoma of the testicle exists in the form of round-celled or spindle-celled, but is more generally, I think, of a mixed variety; and you will find that it is a rapidly growing tumour which has a tendency to form cysts, and that is important, because these cysts in the testicle in former days used to be called cystic disease of the testicle. There is no doubt that most cases of so-called cystic testicle are really cases of sarcoma with cysts developed; and the cysts seem to be developed very much as renal cysts are from obstruction of the tubules. The tubules cannot empty themselves because of the sarcomatous growth pressing upon them, and thus they become distended with their secretion, and form a series of cysts. Now a rapidly growing tumour of the testicle of that kind cannot be removed too soon; the thing should be done without any hesitation at all, and yet you never can guarantee that the patient shall not have further trouble. I remember an officer from India a few years ago from whom I removed a testicle which was distinctly cystic, but which was also sarcomatous. He got perfectly well and went back to India, but died within two years with growths in the neck and chest, and with just the ordinary history of sarcoma developing in other parts of the body. The form of cancer that you meet with is generally encephaloid. Scirrhus is extremely rare, but encephaloid cancer is not very uncommon. In these cases of encephaloid cancer we have very rapid growth; there is also a tendency to fungate, and the fungus is the true fungus hæmatodes of the older surgeons, by which I mean a large bleeding mass protruding from the scrotum, very different from the benign fungus, which is perfectly callous, and does not bleed at all. It is a great misery to the patient, and tends of course to shorten his life by the irritation which it sets up. In these cases of malignant disease the great tendency is to deposit in the glands higher up. You find the whole cord thickened and the glands in the lumbar region involved. You ought to remove these testicles in all cases as soon as you see them. Still, you may be pretty sure the patient will die some months afterwards from deposit in the internal organs.

ABSTRACT OF

The Lettsomian Lectures

ON

ANÆMIA, ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London, 1891,

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LECTURE I.

MR PRESIDENT AND GENTLEMEN,—It has seemed to me that the time has come when the careful and detailed work on anæmia which has been accomplished in the last few years by many able observers, both in this country and abroad, may be usefully brought together, and thus allow of our taking a comprehensive view of the whole subject. This necessitates my commencing with some elementary details, with which you are familiar; but unless we agree upon what is to be regarded as the normal condition of the blood, and its beginnings and endings, we cannot indicate what are departures from it. Whether regarded as an internal medium or as a tissue, a mechanism exists, in ordinary circumstances, whereby the blood maintains a standard, both as regards its quantity and quality. Unfortunately we have no clinical means of estimating the quantity of the blood, and we are obliged to accept the physiological teaching that in

man it generally represents about one-thirteenth of the body weight of the individual. The blood is composed of formed elements floating in a fluid—the plasma.

The *plasma* is a clear fluid consisting of fibrine, or fibrine factors, and serum. It is alkaline in reaction, owing to the presence of disodic phosphate, and sodium of bicarbonate. V. Jaksch has recently shown that its alkalinity is diminished in pernicious anæmia and leuchæmia. The serum has a specific gravity of from 1026 to 1029, whilst the specific gravity of the blood as a whole ranges from 1035 to 1075. Dr. Lloyd-Jones[1] has lately made some observations on the specific gravity of the blood, showing its variations at different ages, and the influence of food and exercise. It is probable that marked alterations in the specific gravity of the blood exercise an influence on the red corpuscles. In pernicious anæmia the specific gravity of the blood is usually between 1028 and 1038. In anæmia, in its higher grades, there is a marked diminution in the albuminous constituents, especially the hæmoglobin, of the blood.

The coloured or red blood-corpuscles.—They have in the adult an average size of 7·5 μ (micro millimetres), but their range is between 2·5 μ and 14 or even 16 μ. To the smallest of these the term microcytes has been applied, and to the largest megalocytes. The size of the red corpuscles is influenced by age, and is markedly altered in disease. They vary also in the amount of hæmoglobin they contain. Nucleated corpuscles, which exist in the embryo, are probably never found in the blood in post-embryonal life except as the result of disease. The number of red corpuscles in health varies from 5,500,000 to 4,000,000 per cubic millimetre, or from 110 to 80 per cent., being lower in the female than in the male.

The sources of the red corpuscles.—Passing by their origin in the embryo, their sources after birth are practically confined to the bone marrow, the spleen, and perhaps the lymphatic glands. Their chief source is the marrow. As to their mode of origin in the marrow there is considerable dispute. By many it is believed that they take their origin in the parenchyma—either from marrow cells (Neumann, Osler, and others), or from leucocytes (Kölliker, Malassez, Gibson, and others), whilst Bizzozero and Torre, and more recently Denys, maintain that they arise entirely within the vessels of the marrow. Gibson,[2] who has studied the question very carefully, states that they arise from marrow cells, or leucocytes brought to the marrow, and that the earliest stage is a cell which has at first a thin ring of protoplasm containing hæmoglobin at its periphery. This gradually increases so as to fill the whole space between the cell envelope and the nucleus; and as the hæmoglobin-tinted peri-nuclear substance increases in amount, the nucleus appears to become smaller and to retreat towards the centre of the cell; the cell, as a whole, at the same time becoming smaller. He believes that the nucleus is the active agent in attracting the hæmoglobin to the cell, and that when this function is fulfilled it disappears. Osler[3] believes that the nucleated red corpuscle is derived from the clear-bordered marrow cell, there being, in his opinion, no essential difference between the protoplasm of the two cells. He thinks the colourless marrow cells are derived from small lymphoid elements resembling free nuclei (primary lymph cells—proto-leucocytes). Osler further believes in the development of red corpuscles from myelo-plaques and from the elongated cells of the stroma; in the latter supporting the observations of Schäfer. Bizzozero in a recent paper[4] has gone over the ground which he has previously explored, and insisted so strongly on certain points capable of verification that I have obtained the assistance of Dr. James Galloway to institute some investigations on the development of the red corpuscles from the marrow. These have been made on the marrow of fowls. Great importance is attached to the examination of fresh marrow, simple hardening in Müller's fluid, and examination of unstained sections; but great advantages are also obtained from staining sections by various dyes after hardening in corrosive sublimate, then in alcohol diluted with an equal volume of a 1 per cent. solution of chloride of sodium, and ultimately in absolute alcohol. It is insisted upon that to obtain a knowledge of the sources of the developing blood-corpuscles *sections* must be examined. The observations that Dr. Galloway and I have made agree with those of Bizzozero, that no hæmoglobin-tinted cells are to be found outside the lumen of the bloodvessels. The vascular arrangement of the marrow is peculiar. The arterial and venous trunks are situated in the axis, and the venules converge from the periphery to the axis like the spokes of a wheel. So great a disproportion exists between the calibre of the small arterial capillaries and the large venules that the circulation in the latter must at all times be very slow, and thus favour the developmental changes in the venules. Moreover, as many observers have demonstrated, but which, owing to the restrictions placed on experimental researches on animals in this country, we have been unable to verify, in animals made anæmic by repeated bleedings the yellow marrow is converted into red marrow. This is caused chiefly by absorption of the fat cells and a great dilatation of the venules. In healthy animals to some extent, and in a far more marked manner in anæmic ones, the corpuscles in the venules of the marrow presents an arrangement not observed in other parts of the body. In the axis of the venules are fully developed red corpuscles; between these and the periphery of the vessel are found two kinds of cells, leucocytes in greater numbers than are found in other veins of the body, and young red corpuscles distinguished by their round or slightly oval form and the character of their protoplasm and nucleus, many of which are undergoing indirect divison (karyokinesis). To those developing red corpuscles the name of "erythroblasts" has been given. It is stated by Bizzozero that in anæmiated animals three zones may be readily made out—a central one, of fully developed red corpuscles; a peripheral one, of leucocytes and erythroblasts; and a large middle zone, of greatly increased numbers of erythroblasts. Denys[5] has made similar observations, but he and Bizzozero disagree as to the nature of the erythroblasts. Denys asserts they are destitute of hæmoglobin, and are transitional forms between leucocytes and red corpuscles. Bizzozero, on the other hand, maintains that Denys' observations are founded on error, owing to his methods of hardening and staining depriving the erythroblasts of their hæmoglobin colouring matter. My own and Dr. Galloway's observations go to confirm Bizzozero, and by examining sections simply hardened in Müller's fluid, or stained by means of Müller's or Foa's reactions, one may convince himself that the erythroblasts at all stages really contain hæmoglobin. To summarise Bizzozero's conclusions, with which our own observations agree, it may be stated as regards the marrow: (1) That blood formation is entirely *endo-vascular;* (2) that the young red blood-corpuscles arise from pre-existing red corpuscles; (3) that they arise by a process of indirect division (mitosis). Colourless corpuscles also arise by mitosis from the cells of the parenchyma and from leucocytes within the venules of the marrow. Bizzozero has years ago shown that the development of red corpuscles in the marrow is the same in all vertebrata as in birds. All observers are agreed that the nucleated red corpuscle is the immediate precursor of the fully developed non-nucleated red corpuscle. There are still differences of opinion as to the process by which the nucleus disappears, some believing with Rindfleisch that it is extruded from the cell; others, with Kölliker and Neumann, that it undergoes disintegration. No satisfactory explanation is afforded of how the young cell eventually acquires its characteristic discoidal form on the theory that the red corpuscles are developed from leucocytes. If, however, it is admitted that they are developed from pre-existing red corpuscles, this is easily understood as a consequence of their ultimate and complete development.

Blood-forming functions of the spleen.—The spleen appears to take but little share in the formation of red corpuscles in health, but its latent capacity appears to be called into activity in some cases of anæmia. This has been shown by Bizzozero and Salvioli, and more recently by Gibson. The *lymphatic glands* also appear to have, according to Gibson, slight powers of generating red corpuscles, but there is no convincing evidence that the thyroid body has any such function.

The seats of destruction of red corpuscles (*hæmolysis*).—Large numbers of red corpuscles are being constantly destroyed in the formation of bile, urinary pigments, and other colouring matters derived from hæmoglobin. The chief seat of destruction is within the portal system, and

[1] Journal of Physiology, 1887.

[2] On Blood-forming Organs and Blood-formation: Journ. of Anat. and Physiol., vol. xx., 1886.

[3] Cartwright Lectures: Brit. Med. Journ., vol. i., 1886.

[4] Archiv für Mikroskopische Anatomie, Band xxxv., Heft 4, S. 424.

[5] La Structure de la Moëlle des Os et la Genèse du Sang chez les Oiseaux La Cellule, tom. iv., fas. 1.

outside this in the bone marrow. The difficult problem of blood destruction has been very carefully studied by Dr. William Hunter.[6] He has shown that it is of two kinds: (1) *Passive destruction*, the ultimate destiny of the red corpuscles which live their alloted span of life—it is characterised by the large size of the pigment granules, which are always contained in leucocytes in the capillaries, and never in the hepatic cells; (2) *active destruction*, in which the hæmoglobin escapes from the corpuscles into the plasma and is secreted from the liver cells, in which it may be found, especially in the portal zone. Where *active* destruction takes place is still disputed. Hunter believes that it occurs in the gastric, intestinal, and splenic radicles of the portal vein, but Mott[7] and Schäfer have lately thrown doubt on the share taken by the spleen. In the spleen, marrow (and lymphatic glands?) are found "blood-corpuscle-holding cells," in which are found red corpuscles undergoing disintegration.

The colourless or white blood-corpuscles (*leucocytes*).—Many additions to our knowledge concerning the white corpuscles have been made in recent years, especially by Ehrlich.[8] It has been shown that the white corpuscles differ much amongst themselves—certainly as regards their morphological characters, and probably as regards their physiological functions. They take their origin from lymphatic structures, the spleen, and the marrow. In severe anæmia Ehrlich has shown there is an increase of the poly-nuclear, and later of the mono-nuclear leucocytes. They ultimately undergo disintegration, forming "elementary granules."

Blood platelets.—As many theories have been advanced regarding these formed elements as the bodies themselves have received names. They cannot all be regarded as artificial, as they have been seen by several good observers in the flowing blood where care has been taken to guard against injuries to the blood and bloodvessels. Hayem and Pouchet believe them to be developmental forms of red corpuscles, but the majority of observers regard them as broken-down red or white blood-corpuscles. They are markedly increased in most forms of anæmia, especially in the primary anæmias.

Hæmoglobin.—It is shown that whilst in health there is generally a fixed relation between the amount of hæmoglobin and the number of red corpuscles in the blood, this is liable to be disturbed in disease. Dr. Osler[9] has well summarised the variations that occur: "(1) In chlorosis the hæmoglobin is reduced out of proportion to the number of corpuscles, so that the individual worth of each red corpuscle in colouring matter may be greatly lowered. Thus, the true anæmia (or functioning properties of the blood) may be very much greater than the number of corpuscles per cubic millimetre would indicate; (2) in ordinary anæmia, from hæmorrhage or organic disease, the average worth of hæmoglobin of each corpuscle usually remains unaltered, and the percentage of colouring matter corresponds with the percentage of corpuscles; (3) in certain cases of pernicious anæmia the interesting fact has been ascertained that the percentage of hæmoglobin is increased, and the anæmia is in reality not so great as the reduction in the number of corpuscles would appear to indicate."

Having now considered the blood in health, we are in a position to discuss the departures from this standard, in so far as they relate to anæmia. Anæmia may be defined as a diminution of the quantity of the blood, of its corpuscles, or of its colouring matter. To the first the term "oligæmia" is applied, to the second "oligocythæmia," and to the third, "oligochromæmia." They all have this in common: that they indicate "a poverty of the blood in normal functional red corpuscles" (Cohnheim). We have seen that there is a constant using up and building up of blood. In health a balance is maintained. In anæmia there is a failure of adjustment between the gains and the losses, a want of balance between the income and expenditure. Until recently so little was known concerning blood formation and blood destruction that it was difficult to say where we should look for evidence as to which of these processes was at fault. Our knowledge is now reaching that point where we can make defective hæmogenesis or excessive hæmolysis the basis of our pathology. Anæmia may depend upon excessive destruction of red corpuscles, so that the blood-forming powers are unable to compensate for the loss. On the other hand, the blood-forming capacity may be defective, and not keep pace with even a normal degree of blood destruction. Or, lastly, defective hæmogenesis and excessive hæmolysis may each be in operation, and each aggravate the effect of the other. Defective hæmogenesis is indicated during life by the characters of the blood-corpuscles, especially their deficiency in hæmoglobin, and after death by the condition of inactivity of the cytogenic organs. Excessive hæmolysis is indicated by the characters of the blood during life, in the excessive secretion of dark bile, and the excess of pigments (urobilin) and iron in the urine, and post mortem by the evidences of excessive active destruction of blood, in the liver and kidneys especially. Defective blood formation may be due to a great variety of causes: insufficient quantity or unsuitable quality of food; failure of the masticatory, digestive, or assimilative powers; unfavourable hygienic conditions; the presence of growths intercepting the material for blood formation; and failure, congenital or acquired, of the cytogenic organs. Excessive blood destruction may be due to the processes of fever and inflammation, or to the presence of deleterious matters in the blood acting upon and destroying the red corpuscles.

Anæmia thus depending on such a variety of causes, it becomes necessary to arrange the cases in some order, and the classification which clinical convenience and pathological propriety suggest, and which I shall adopt, is into (1) Secondary and Symptomatic Anæmia, (2) Primary and Idiopathic Anæmia.

In Secondary and Symptomatic Anæmia we have conditions in which the blood deficiency is not the essential characteristic of the disease, and in which there are other symptoms present which are not explained by the existence of the anæmia. In Primary and Idiopathic Anæmia, on the other hand, the anæmia constitutes the main characteristic of the disease, and the other symptoms are all dependent upon it. Dr. Hunter[10] has well defined what characterises an idiopathic anæmia. Dr. Pye-Smith[11] would make a third division of cases of anæmia, "formed of all cases of anæmia associated with disease of the cytogenic organs, whether or not leuchæmic." These, which undoubtedly form, clinically and pathologically, a compact group, should, I think, be included under idiopathic anæmia. In leucocythæmia there is not only a great excess of colourless corpuscles, but a marked deficiency of red corpuscles, to which many of the symptoms are due. As long as the question of the origin of the red corpuscles from the white is unsettled it is difficult or impossible to decide upon the relation of these changes. If, as many believe, the red are transformed colourless corpuscles, an arrest of development is a ready explanation. If, on the other hand, as seems to me more probable, all red corpuscles arise from pre-existing red corpuscles, this inviting hypothesis is no longer tenable. I would merely draw attention to one point which appears to me to militate against the view that the deficiency of the red corpuscles is due to a non-transformation of colourless into red corpuscles, and this is the condition of the marrow. In leucocythæmia the marrow is usually in a condition of hyperplasia, which is favourable for the production of colourless corpuscles, especially of the "eosinophile leucocytes," which Ehrlich has shown are always increased; but, growing as this does at the expense of the bloodvessels, it is unfavourable for the production of red corpuscles, which we have seen are formed in the venules. Somewhat similar arguments might be used regarding "anæmia splenica," "anæmia lymphatica," and "anæmia myelogenica."

Thus, I consider all cases in which anæmia is not symptomatic should be regarded as idiopathic. The term "idiopathic anæmia" was, as is well known, first applied by Addison to that form of anæmia of which he gave such a masterly description. Others besides myself[12] have urged that it should be restricted to the class of cases described by Addison. The progress of our knowledge, in my opinion, now renders it advisable to enlarge its meaning so as to embrace all primary anæmias, and to use it as a generic term, including several species. Of those species two are well defined—chlorosis and the form described by Addison, which has by common consent come to be called "pernicious anæmia," and which name I now think it is useless to resist. Probably besides these two species there are other distinct forms of idiopathic anæmia, to which I shall have occasion to allude in subsequent lectures.

[6] Arris and Gale Lectures: Brit. Med. Jour., vol. ii. 1889.
[7] Practitioner, Aug. 1890.
[8] Zeitsch. für Klin. Medicin., Band i., 1880, S. 553.
[9] Cartwright Lectures: Brit. Med. Jour., vol. i. 1886, p. 862.
[10] Is Pernicious Anæmia a Special Disease? Practitioner, August, 1888.
[11] Guy's Hospital Reports, vol. xxvi.
[12] THE LANCET, vol. ii. 1878, p. 797.

ON THE

STENOSIS OF THE TRACHEA AND LARYNX WHICH OCCASIONALLY FOLLOWS THE USE OF A TRACHEOTOMY TUBE;

WITH REMARKS ON THE PRESENT POSITION OF INTUBATION.[1]

BY BERNARD PITTS, M.C. CANTAB, F.R.C.S. ENG.,

AND

WILLIAM F. BROOK, F.R.C.S. ENG.

THE main object of this paper is to illustrate some of the causes which may prevent the return to the natural channel for breathing—after the use of a tracheotomy tube for a prolonged period—and to draw attention to the treatment of such cases. Most frequently the difficulty arises from a want of confidence on the part of the patient, and by a little encouragement and by the use of a tube with an upward opening it is easy to overcome this very common trouble. In the four cases we narrate the obstacle to natural breathing was some form of definite mechanical occlusion of the upper part of the trachea or of the lower laryngeal aperture. Such real obstruction is, fortunately, not of common occurrence, and the difficulty of overcoming it is very great, and in some cases insuperable. Some lessons may, we think, be learnt from a study of these cases. At any rate, we feel that we have gained experience, and are in a position to deal with any future cases with more precision and with quicker success. Tracheotomy in young children is usually performed high, and the cricoid is probably often divided. Unless the tube happens to fit the particular case exactly, a good deal of irritation of the back of the trachea, or even of the lower laryngeal aperture, is apt to be occasioned by the angle of the tube. The tube rarely fits comfortably if the cricoid has been divided, and it seems important to avoid this division if possible. No doubt much friction by this part of the tube is occasioned by movements of the larynx in swallowing and by restlessness on the part of the patient, and this friction would be greatly diminished if a tube with a movable collar, such as a Durham's tube possesses, were more universally adopted. Unless there be allowance for variation, a tube which fits well in a child of a certain age will be most unsuitable for a child of the same age, but with a more deeply placed trachea. At Great Ormond-street Hospital an ordinary bivalve has been in most frequent use, and possibly this may have occasioned some of the irritation in two of the cases requiring after-treatment for stenosis. The pressure sore that is too often found on the front wall of the trachea, and which is caused by the end of the tube, has not had in any of our cases anything to do with the after trouble; it is, however, evidence of the use of a tube of unsuitable shape.

CASE 1.—Edward F——, aged three, was admitted to Great Ormond-street Hospital on Dec. 3rd, 1886, under the care of Dr. Cheadle, with difficulty of breathing and marked stridor. He had been an in-patient for a short time early in the year for a similar attack, from which he recovered without operation. On examination, the throat was found congested, but no membrane was to be seen. There was no evidence of any syphilitic trouble in the family. The symptoms gradually became more urgent, and on Dec. 14th tracheotomy was performed by the house surgeon with instant relief. The tube was removed on Dec. 17th for five hours, but had to be replaced. The child now had a sharp attack of scarlet fever with high temperature and some lung complications, and was obliged to wear the tube continuously through the attack.—Feb. 15th, 1887: Trace of albumen; child pale and wasted. The tube was taken out, and on Feb. 18th the wound had nearly closed and the breathing was satisfactory.—March 1st: Right side dull; breath sounds weak; much stridor. Aspirator used, and a few drops of pus drawn off.—8th: The difficulty in breathing became suddenly urgent, and the house physician had to perform fresh tracheotomy, and only just managed to pull the child round.—April 20th: Better; running about the ward; gaining flesh, but still obliged to wear the tube.—June 20th: The tube was left out on trial; spasm of glottis one hour after, and the tube had to be replaced.—24th: Mr. Lewis, the house surgeon, under chloroform, passed a Macewen's tracheal catheter with a little difficulty up from the wound through the mouth, and then pushed the lower end downwards into the trachea below the wound; the catheter was retained, but during the night the child held the tube so tightly with his teeth as to prevent the entry of air, and it had to be removed. During the next three months Mr. Lewis repeatedly passed these catheters, and when the wound became smaller he introduced the tube from the mouth down the trachea beyond the site of the tracheotomy wound. The boy could not retain the tube long, rarely more than one hour at a time, and it occasioned great distress. There is no doubt, however, that he improved, the tracheotomy opening closed, and for a short interval he was able to breathe comfortably. Mr. Lewis makes a note that he always had great difficulty in introducing the tube through the mouth.—Oct. 17th: Had a bad attack of dyspnœa in the night, fifteen days after the last dilatation.—19th: Tracheotomy was again necessary. The house-surgeon cut through a quantity of cicatricial tissue, and had some difficulty in getting the tube to pass into the trachea, owing to the narrowing of the lumen of the trachea.—Nov. 3rd: The child left the hospital for the Highgate Convalescent Home, still wearing a silver tube, and spent the next year either at the Convalescent Home or at his own home, wearing the tube continuously.

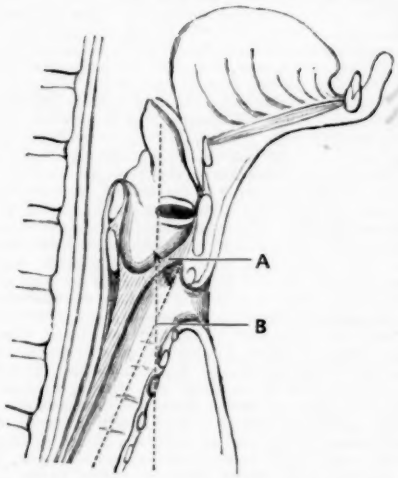
He was readmitted to Great Ormond-street Hospital on March 1st, 1889. He was then in fair condition, and able to phonate fairly well by putting his finger over the opening of the tube.—March 4th: The tube was left out for four hours; the opening rapidly contracted, making the reintroduction of the bivalve tube difficult.—5th: The tube was taken out as usual, and a sponge tied over the opening. After forty minutes, whilst the child was playing on the ward velocipede, he became distressed and the sponge was removed, but without any relief. He suddenly lay on the floor and became cyanosed, even to his finger tips. After a short struggle he became quite still, and the staff nurse inserted the tracheal dilator, and by smacking the child succeeded in making him breathe. The tube was inserted by the house physician so soon as he arrived on the spot, and the little fellow was soon comfortable again.—Aug. 21st: By request of Dr. Cheadle Mr. Pitts took charge of the case, and under chloroform intubated the larynx with an O'Dwyer's tube. There was no difficulty in passing the tube, and the end could be felt through the tracheotomy opening, but the breathing was not satisfactory, and it was evident that the tube did not lie straight in the trachea, but the lower end was tilted forwards and to one side. Several sizes of intubation tube were now tried, but without success; and, as the child was rather exhausted, the tracheotomy tube was replaced, and he was put to bed. The next day, Aug. 28th, chloroform was administered by Mr. Priestley, the surgical registrar, and the following is his description of the operation. The wound was extended upwards, and the thyroid partially divided. Retracting the parts with blunt hooks, it was found that there was a rather thick pinky-white band of fibroid tissue, which started from just below the cords and extended obliquely downwards from right to left, and thus a sort of diaphragm was formed, nearly blocking up the lower aperture of the larynx. There was also a general overgrowth of fibroid tissue round the commencement of the trachea, and at this point the trachea was seen to bend backwards. It was found necessary to paint the interior of the larynx with cocaine, as the irritation of the manipulations caused vomiting, but this was entirely kept under by the cocaine. With a pair of curved scissors the band was now dissected away and as much of the surrounding fibroid thickening as possible. The cords were examined from below, but no growth or thickening was found higher in the larynx. A long curved tracheotomy tube was introduced and the thyroid brought together by a silver suture. Two sutures were placed below the tube, so as to raise the height of the tube, and thus try to keep dilated the part where the dissection had been carried out.—Sept. 7th: Tube removed.—14th: Wound healed, voice improved, and breathing easy and without stridor.—Oct. 19th: For the last fourteen days there has been increasing inspiratory stridor and occasional distress during the night. Tracheotomy was performed and patient allowed to resume his old tube life till Dec. 16th, when it was determined to again try the effect of intubation with O'Dwyer's tube. Under an anæsthetic the largest

[1] Read before the Medical Society on Monday, Dec. 1st, 1890.

size intubation tube was easily passed by Mr. Brook, house surgeon, and a tracheal plug was applied to the opening in the neck. This tube was well tolerated and allowed to remain in till Dec. 18th. During this time the boy was quite comfortable, playing about the ward, and taking minced food and pudding. He remained without further intubation till Jan. 2nd, 1890, the tracheal wound being then quite healed. The intubation tube was passed without an anæsthetic by Mr. Brook, and left in twenty minutes. Intubation without an anæsthetic was again done at the end of the month, once during February, and for the last time on March 4th, 1890; the tube passed with great ease and was left in ten minutes. He was now allowed to go home, and has never been intubated since. During the last nine months he has remained quite well, and has been constantly helping his father as a fish hawker; he uses his voice constantly in crying his father's goods. He is here to-night, and if we can get him to shout, he will show that—notwithstanding his various tracheotomies, thyrotomy, and intubations—he has a remarkably loud voice, and one well suited for his profession as a hawker.

We have narrated the case of this boy rather fully, for it was the first of the series. For more than three years he baffled all the numerous efforts made to do away with the tracheotomy tube, and it was only after the thyrotomy that it was possible to determine the exact nature of the obstruction. Dilatation of his larynx by Macewen's catheters was most carefully carried out by Mr. Lewis, and all ordinary means were tried to get rid of the tracheotomy tube and failed, except for brief periods. It was never quite clear what was the primary cause of the dyspnœa. Shortly after the original tracheotomy he had a bad attack of scarlet fever, and probably this explains the irritation set up by the tube. In the twentieth volume of the Clinical Society's Transactions several very interesting cases are recorded by Mr. Bilton Pollard where he succeeded by the use of Macewen's tracheal catheters in establishing natural respiration. In the case of E. F——, success at first seemed to attend this method, but relapse always speedily followed. By reference to the diagram (Fig. 1) it is quite easy to see why this failure

FIG. 1.



A, Cicatricial tissue. The arrow shows the lumen of the diaphragm.
B, The dotted lines show the alteration in the axis of the trachea.

occurred, and also why dilatation by O'Dwyer's method at first was useless. The cicatricial band formed almost a complete diaphragm, and the result of any form of intubation was merely to dilate the lumen of the diaphragm or else to push the diaphragm before the tube. The lesson that was learnt is that with failure by simple intubation to restore the natural passage, a free exploration of the tracheal wound should be made, and all cicatricial tissue at once be thoroughly removed, and the passage thus prepared for intubation, which should be then again employed and repeated from time to time, until all tendency to recontraction has passed away. After the thyrotomy and excision of cicatrix in E. F——'s case, too long an interval was allowed before intubation was again used; with more confidence in intubation the last tracheotomy would have been unnecessary. The advantages of O'Dwyer's method over Macewen's tracheal catheters are sufficiently obvious. An O'Dwyer's tube has an increased circumference at the part wanted for such dilatation. It is well tolerated by the patient for a lengthy period, and food can be taken without difficulty.

CASE 2.—Charles C——, aged nine, was admitted on Aug. 24th, 1889, under Dr. Cheadle, with membrane on soft palate and difficult breathing. High tracheotomy was performed by the house surgeon, with relief of symptoms.—Aug. 26th: Progressing favourably till last night, when the child suffered from frequent cough and bleeding from the tube. An anæsthetic was given, and several bleeding points in the depth of the wound were secured. During the next three months all attempts to remove the tube were attended by immediate distress, even when an anæsthetic was administered.—Dec. 10th: Transferred by Dr. Cheadle to the care of Mr. Pitts. The tracheal wound was enlarged, and a quantity of granulation tissue was found at the front and sides of the trachea at the lower border of the wound; this was removed with scissors and a sharp spoon. The largest sized intubation tube was introduced and a rubber plug put into the tracheal wound. The tube was coughed out in half an hour and the tracheotomy tube was replaced.—11th: The house surgeon, Mr. Brook, intubated without an anæsthetic.—12th: String was removed, as it occasioned some cough and discomfort. This tube remained *in situ* from Dec. 11th till the 18th; it was then removed and not replaced.—Jan. 1st, 1890: Tracheal wound healed; voice natural.

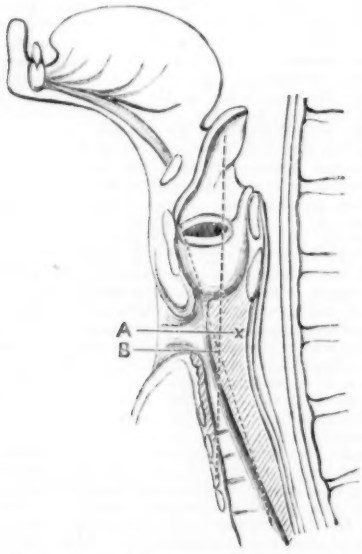
On Jan. 10th (twenty-four days since last intubation) he had a rise of temperature, and some pneumonia at the left base. No further intubation was done, and he was discharged well on March 6th, and the voice and breathing were quite normal. He has been kept under observation since, but no further intubation has been necessary. At the present time his voice is clear, and there is no stridor even after exertion. In this case, since dyspnœa had for four months constantly attended every effort to dispense with the tracheotomy tube, it was thought right to make an exploration of the wound before employing intubation. Possibly the removal of the granulation tissue might have been sufficient, but we thought it advisable to keep up some dilatation until the surface, laid bare by the removal of the granulation tissue, had completely healed.

CASE 3.—Albert H——, aged three years and three months, was admitted on July 31st, 1889, under the care of Dr. Cheadle, suffering from diphtheritic membrane on tonsils and marked dyspnœa. Tracheotomy was at once done by the house surgeon, and a large quantity of membrane was removed from the trachea.—Aug. 4th: The wound was covered with membrane, and during the next week great sloughing of the wound went on.—9th: Much of the fluid taken by the mouth escaping by wound, sore rapidly increasing, and at the bottom of the wound the trachea to be seen lying bare for more than one inch of its extent, and through the large opening in it the posterior wall of the trachea can be seen.—10th: Rectal feeding necessary.—11th: Enemata returned, so nasal feeding substituted. Child very collapsed and almost pulseless.—Sept. 9th: Child has slowly improved; gets up wearing tube.—Oct. 28th: Unable to phonate or to do without tube; bougie passed through larynx.—Dec. 12th: Dr. Cheadle transferred the patient to the care of Mr. Pitts. Intubation under chloroform. Tube retained three days, and then removed on account of rise of temperature. Tracheotomy tube replaced.—23rd: Both tonsils and some adenoids removed by Mr. Brook to facilitate intubation.—Jan. 2nd, 1890: Intubation again under chloroform, but the tube was removed next day, as there was a rise of temperature. Small tube difficult to pass.—11th: Intubation under chloroform. Tube retained till 16th, when a larger one was passed without an anæsthetic; this was retained until Jan. 20th, and then the largest tube but one was introduced.—28th: The largest tube was passed—i.e., one suitable for a child of twelve.—Feb. 3rd: The tube was taken out, and ten minutes after the child was unable to breathe, and the tracheotomy tube was put in, the opening having been kept patent by tracheal plug.

Intubation after this was several times tried, but became more difficult, and on Feb. 16th the child was placed under

chloroform and examined, and the tracheotomy wound was freely enlarged; an examination showed that at the level of the tracheal opening there was a dense collar of cicatricial tissue encroaching on the lumen of the trachea. The trachea at the same point appeared to bend backwards, the part below forming an angle with the part above the obstruction collar, as shown in Fig. 2 The

FIG. 2.



A, The cicatricial tissue in this case extended a long way down the back and sides of the trachea.

cicatricial tissue was dissected away very freely, together with the lining of the tracheotomy opening. A large tracheotomy tube was then introduced. Intubation was recommenced on Feb. 27th; the largest size but one was left in. It was coughed out next day, but although the tracheal wound was plugged the patient could breathe comfortably through the mouth. The tracheal wound was allowed now to heal; intubation was repeated every few days until May 7th, when the child developed measles. At this period phonation (an extremely deep note) was just possible with great effort. During the attack of measles it was found necessary to keep the intubation tube almost constantly in. Intubation was frequently done during June, and on July 14th the child was sent home, as it was thought he might be intubated as an out-patient. He returned in three days after his discharge, a tube was put in, and he wore this at home for ten days, taking ordinary food as usual. The tube was now left out sixteen days, and then again worn for ten days; it was then taken out and replaced and retained for another week. During the last two months the mother neglected to bring the child to the hospital. By special request the mother brought the child to see us on Nov. 23rd. There was then some stridor and dyspnœa on exertion. Phonation only by great effort.

Remarks.—This case shows the great difficulty that may be experienced in the restoration of natural breathing. Considering the extensive sloughing of the tracheal wound and the necrosis of portions of the tracheal rings, it cannot be wondered at that an extensive formation of cicatricial tissue arose. Some kinking of the trachea opposite the tracheal opening is, we believe, of not infrequent occurrence, and this, combined with the cicatricial stricture, made the case remarkably intractable. Much time was wasted in the treatment by not attending to the lesson that ought to have been learnt from the first case—namely, where intubation is not at once satisfactory, to explore for and remove, as far as possible, all mechanical obstruction. We were unwilling, after the extensive sloughing that had occurred, to meddle with the wound if we could avoid it. This case must be considered as still under treatment. There must be as much necessity for constant dilatation as in a bad cicatricial stricture of the urethra. We believe, however, if the mother had not neglected to bring the child for the last two months it would now have been in a more satisfactory condition than he is at present. The parents unfortunately considered the child so well as not to require further treatment.

(To be concluded.)

CHOLERA IN NORTHERN SYRIA.

BY JOHN WORTABET, M.D.,

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THE present epidemic of cholera in the north of Syria originated from Mesopotamia, where it was well known to have been for some time previously. It appears to have been imported to Aleppo by a nomadic tribe of Bedouins from a point on the Euphrates about fifty miles from that city, and where its first appearance was officially recognised about Sept. 13th. From this point it spread northwards, implicating Killis, Aintab, Berejeck, Orfa, and Marash; and to the south, where the principal places attacked were Hamath, Antioch, and Homs. The information about the former of these regions is too meagre and unreliable to enable me to give any details, and it is quite possible that the infection may have been brought to some of the places mentioned directly from some Mesopotamian focus. But there can be no doubt as to the extension of the disease from Aleppo southwards, and it is with this that I wish to deal in the present communication. This extension took place in spite of the so-called cordons and quarantines which the Government imposed between infected and sound spots. And yet it is equally certain that, to the unusually vigorous measures of this kind taken by the governors of Damascus, Beyrout, and Mount Lebanon, isolating these tracts from Aleppo, Hamath, Homs, and Antioch, the immunity, so far, of these places is due. It remains, however, to be seen whether they will succeed in warding off the disease permanently, or whether they will be useful only in retarding its approach until the cold weather sets in, when it is hoped its violence may be mitigated. That cordons and land quarantines carried out effectually, and under scientific and favourable conditions, will prevent the diffusion of cholera and destroy it on its way, has, I think, been satisfactorily proved this year in the case of the Hejaz pilgrims, who were put into quarantine at distant spots from any inhabitable land, and from which escape was impossible. Those pilgrims coming from Mecca, Medina, and Jeddah, and bearing with them the disease, were gradually freed from it during their forced detention on the waste shores of the Red Sea; and it was thus that, so far as can be seen, Egypt, Syria, and Turkey were saved from what seemed at one time to be an inevitable fate. The land pilgrims coming from Mecca to Damascus by short stages, isolated through an open and uninhabited route, and taking some weeks on the way, became free of it, and returned to that city in perfect health. But it is far different in a populous land where the means of communication are so great, where cordons have been repeatedly tried and always failed, and where, on the other hand, the value of public and private sanitation has been proved beyond all doubt. The simpler hygienic means, such as cleanliness of dwellings and streets, prevention of the sale of unripe and rotten fruits and unwholesome food, &c., were probably ordered and partially executed in the infected places by the local authorities; but in the equally important matters of drains, gutters, and cesspools, where more scientific and drastic measures are called for, it is to be feared that very little, if anything, was done. Still, it appears that the violence of the present epidemic in Aleppo is very considerably less than that of previous visitations. This is probably due to improved methods of sanitation, while it is certain that in Aleppo there had been up to Oct. 26th no case of cholera among the Europeans and better class natives, whose lives and surroundings were made as unfavourable to infection as possible.

Aleppo is a city of Northern Syria, having an estimated population of about 100,000, and lies in a plain 1600 feet above the sea-level. Its water-supply comes from a small stream which is used up in irrigating the gardens, and its drinking water comes from a spring near Aintah, which is

carried in a covered conduit. On the appearance of cholera about Sept. 12th, and up to the 22nd of that month, no official bulletins were issued, but the officer of health estimated the fatal cases at 21. A local sanitary commission was then appointed, and the following weekly returns are drawn up from its daily reports. It is generally believed, however, that the rate of mortality is very much understated, while a few hold that it is somewhat above the real number of deaths. The number, therefore, is only approximately true, and is given as a fair idea of the natural course and duration of the epidemic in the East, and especially as regards its periods of rise, height, and decline. The last accounts from that city show at this date (Nov. 26th) that the epidemic has entirely ceased.

Estimated cases of death from Sept. 13th to 22nd ...	21
Sept. 23rd to 29th (say, second week)	42
,, 30th to Oct. 6th (third week)	120
Oct. 7th to ,, 13th (fourth week)	190
,, 14th to ,, 20th (fifth week)	165
,, 21st to ,, 28th (sixth week)	47
,, 29th to Nov. 4th (seventh week)	11
Nov. 5th to ,, 11th (eighth week)	37
,, 12th to ,, 18th (ninth week)	21
Total	654

Hamath, a town of about 40,000 inhabitants, lies about three days' journey south from Aleppo, and is built on the two sides of the Orontes, which, taking its rise from a point near Baalbec, runs due north, passes about a mile west of Homs, and at Hamath turns to the west, supples Antioch with its waters, and empties itself into the bay of the ancient Seleucia. Its elevation above the level of the sea is a little more than 1000 ft. Though the official records give Oct. 15th as the earliest date of the appearance of cholera in it, and thus a heavy mortality for the first week, it is more likely that it began some days before it was recognised and officially announced, and that its first cases were few. The following is the record which I have been able to obtain from the official papers:—

First week	—
Oct. 15th to Oct. 21st	88
,, 22nd to ,, 28th	303
,, 29th to Nov. 4th	213
Nov. 5th to ,, 11th	76
,, 12th to ,, 16th	7
Total	687

From Nov. 12th to this date (Nov. 26th) I have been unable to obtain any definite information, but the number of daily deaths has been gradually diminishing, and the epidemic there is said now to have ceased.

Of Antioch, whose population is estimated at 12,000, the records are as follows:—

Oct. 20th to Oct. 26th	22
,, 27th to Nov. 2nd	159
Nov. 3rd to ,, 9th	36
,, 10th to ,, 12th	5
Total	222

This is evidently very imperfect, but I give it for what it is worth.

The following are the returns from Homs, a town of 25,000 inhabitants and a day's journey south of Hamath:—

Oct. 27th to Nov. 2nd	63
Nov. 3rd to ,, 9th	234
,, 10th to ,, 16th	169
,, 17th to ,, 24th	130
Total	596

En résumé, it appears that the epidemic has almost entirely ceased in Aleppo after a duration of about ten weeks, the third, fourth, and fifth showing the highest number of deaths. A late telegram from Hamath gives the same news, though it is quite possible that fresh cases may still break out, as may be observed in the eighth and ninth weeks of the march of the disease in Aleppo, and that a slight rise during the period of decline may be an ordinary phenomenon in the history of cholera epidemics. If, however, the duration of the disease in Hamath, Homs, and Antioch is to be short, this may be due to an unusually long storm of rain and cold which has overrun the whole of Syria since the 15th of this month to this date, or to the unusual severity of the epidemic in those places, which has exhausted itself sooner than it did in Aleppo, where the relative rate of mortality was much milder. Judging from previous cholera visitations in Syria, it seems that the ordinary duration of an epidemic is rarely less, if ever, than ten weeks, and it looks very much as if it had, when the population is stationary, a definite course to run, like a case of typhoid fever and most of the acute diseases. How much this has to do with the life history of the cholera bacillus in a given place is difficult to say in our present state of knowledge. The whole coast of Syria and the whole of its southern part are so far intact, and I do not know how this can be accounted for except by believing that the measures of isolation taken by the authorities have been unusually rigid, and thus effectual in warding off the spread of the disease to these parts up to this date.

Beyrout, Nov. 26th, 1890.

CHOLECYSTOTOMY FOR GALL-STONES, PERFORMED ON THE STRENGTH OF SYMPTOMS WITHOUT PHYSICAL SIGNS.

BY A. W. MAYO ROBSON, F.R.C.S.,

HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY, PROFESSOR OF SURGERY IN THE YORKSHIRE COLLEGE AND EXAMINER IN THE VICTORIA UNIVERSITY.

ON Oct. 25th of last year I had the honour of reading before the Clinical Society of London a paper based on fourteen cases of cholecystotomy. Since that time I have performed the operation nine times without a death, making in all twenty-three cases. In my former paper I gave brief histories of five cases operated upon on the strength of symptoms alone. I have now to add to that series two more cases, notes of which I now give.

Mr. P. B——, aged twenty-nine, residing at Wyke, near Bradford, was sent to see me by my friend Dr. Dearden early in June of last year, when he gave the following history:—He had been quite well up to twelve months ago, when he was seized whilst at work with a sudden attack of severe pain on the right side of the abdomen just below the ribs, which compelled him to return home. The attack lasted for several hours. No jaundice followed, and he was able to return to his duties in a day or two. Ever since that time he had been subject to similar attacks, but on no occasion had he been jaundiced, and he had never noticed any swelling in the region of the liver. The attacks did not recur periodically, he having had once an interval of a month without an attack, whilst on other occasions he would have several in a week. On several occasions the spasms had come on when he was in bed. The attack which he had just previously to admission, lasted six hours. At no time had the motions been clay coloured or the urine specially dark. He was admitted to the infirmary on June 6th, in order that he might be watched for a time, but beyond having several attacks of pain of a similar character no physical signs were noticed. On June 19th cholecystotomy was performed. The gall-bladder was found to be small, and lying well under cover of the liver. One gall-stone was found loose in the gall-bladder, and five others were removed from the cystic duct by means of forceps within, aided by fingers on the outside of the duct. The gall-bladder was so far from the surface that the lower edge of the incision could not be brought to the parietal peritoneum, hence the omentum was made use of to shut out the general peritoneal cavity. This was effected by bringing up the right border of the omentum, stitching it to the incision in the gall-bladder and then to the parietal peritoneum. A drainage-tube was inserted into the gall-bladder, and bile commenced to flow as soon as the operation had been completed. On June 25th the drainage-tube and sutures were removed. On July 4th the discharge had diminished considerably. On the 12th the wound had almost healed, and on the 26th it had perfectly closed. The patient was seen in September, when he was looking and feeling perfectly well, and said that he had not had an attack of pain since the operation.

Mr. R——, aged fifty, was sent to see me by my friend, Dr. Britton of Harrogate, in April of last year. He gave the history of having been perfectly well up to June, 1889, when he had a severe attack of pain in the region of the

liver, which lasted for several days, but which was not followed by jaundice. He had no further attack until November, and between November and Christmas he had five similar seizures. Between January and his seeing me in April he had had seven attacks, only once having been slightly jaundiced, the yellowness of the eyes then only lasting three days. Having very little doubt that the attacks were due to gall-stones, we had the motions carefully examined, and on May 5th, although there had been two attacks since Mr. R—— saw me in April, no gall-stone had been found, although carefully searched for. It was thought that during the attacks of pain a swelling had been noticed on the right side of the abdomen, but this point was not very definite, and when I saw Mr. R—— there was an entire absence of physical signs. Cholecystotomy was recommended and performed on May 6th, when one gall-stone, the size of a cherry, without any facets, was removed from the gall-bladder. Bile flowed at once, and the drainage-tube was removed on the third day, the stitches being taken out on the eighth. At the end of a fortnight the wound had quite healed, and Mr. R—— returned to his home at the end of three weeks. He has remained quite well since, and is now in perfect health. The interest in this case lies in the fact that all the symptoms were dependent on the one calculus.

Besides these cases which I have operated on, I have seen a considerable number of patients whose symptoms were similar to the above, and where I made a diagnosis of cholelithiasis and recommended operation; and I believe that by far the greater number of patients who are suffering from repeated attacks of so called spasms are in reality suffering from gall-stones, and can therefore be relieved if their symptoms are so severe as to require active interference. It must always be borne in mind that unless the gall-stones are small and can be passed, they tend to increase in size and number, and may ultimately lead to most serious complications, among which may be mentioned: (1) Exhaustion from repeated attacks of pain, (2) fatal collapse from acute agony (I have known in one case death to ensue from pain alone, as proved by post-mortem examination); (3) fatal jaundice, (4) dropsy of the gall-bladder, (5) empyema of the gall-bladder, (6) abscess of liver, (7) local peritonitis, (8) perforation of the gall-bladder or ducts, causing abscess, peritonitis, septicæmia, intestinal obstruction, or hæmorrhage. Bearing in mind these dangers of cholelithiasis, and knowing with what little risk the operation of cholecystotomy can be performed if done carefully and with due precautions, I have no hesitation in recommending operation whenever there are repeated attacks of biliary colic apparently due to gall-stones, which do not yield to a definite course, not necessarily very prolonged, of medical treatment.

Leeds.

A CASE OF

ANEURYSM OF THE EXTERNAL ILIAC ARTERY CURED BY COMPRESSION.

BY HORATIO P. SYMONDS,
SURGEON TO THE RADCLIFFE INFIRMARY, OXFORD.

G. S——, aged forty-eight, a sawyer, was admitted to the Radcliffe Infirmary, Oxford, on July 2nd, 1890. The history was that on Feb. 26th, 1890, he felt a sudden cramp in his left leg, after which it became perfectly cold, and felt as if it had been frozen. His power of moving it was also impaired, and since then he has been unable to work. He has, however, been able to move about, but has suffered from great pain in the limb, especially in the sole of the foot, and at times in the region of the left Poupart's ligament. About three weeks before admission, while the patient was passing his hand over this region, he felt a pulsating swelling, and, failing to find anything corresponding on the right side, he came to the infirmary, where he was admitted, as above stated. On examination, there was observed just above the left Poupart's ligament a marked prominence, with a heaving expansile pulsation. A similar pulsation was also plainly seen continued from the swelling down the thigh as far as the apex of Scarpa's triangle. On palpation a round, smooth swelling about the size of a hen's egg was felt, apparently well defined above, but below somewhat fusiform, and passing into the commencement of the femoral artery. It exhibited uniform expansion, and over it a well-marked systolic bruit was audible. The pulse at the ankle on both sides was very weak, but the left was decidedly feebler. With regard to the heart, there was no visible cardiac impulse in the front of the chest, the apex beat could not be localised, and the cardiac dulness was masked by emphysema of the lungs. The heart sounds were feeble, but no murmur existed. The pulse was 74, slightly irregular, and of low tension. There was marked pulsation visible in the brachial arteries at the bend of the elbows and in the radials at the wrists. The vessels rolled under the fingers like cords. There was no history of syphilis.

After consultation it was determined to apply compression to the common iliac artery with a view to curing the aneurysm. On July 22nd accordingly, at 10.35 A.M., the patient being put under the influence of bichloride of methylene, given from a Junker's inhaler, a Lister's abdominal tourniquet was applied on a line with the highest points of the iliac crests and a little to the left of the middle line. On tightening it up the aneurysm ceased to pulsate, though pulsation continued in the right limb. Pressure was kept up till 5 P.M., when the tourniquet was slackened for a few seconds; but as pulsation slightly returned in the aneurysm, it was again tightened. At 7 P.M. pressure was again gradually taken off by loosening the screw of the tourniquet by a quarter of a turn every fifteen minutes till 10.15 P.M., when the instrument was entirely removed, the aneurysm showing no sign of pulsation, and being hard and firm to the touch. A sixth of a grain of hydro-chlorate of morphine was given hypodermically and the methylene discontinued. The patient slept till 2.30 A.M., when he became very violent and restless. There was no return of pulsation in the tumour. On July 25th there were some symptoms of peritonitis and enteritis. On the 26th some swelling of the left parotid was observed, which next day had increased to the size of a pigeon's egg, and on the 28th there was a similar but smaller swelling of the right parotid. The urine contained a small trace of albumen. The temperature, which had hitherto been normal, rose to 100·8°, but again fell on the following day to 99·2°, the left parotid swelling being slightly larger and more inflamed, but the right smaller. The tumour in the groin was smaller and harder. On Aug. 1st the left parotid was still inflamed and swollen, but there was no fluctuation. The swelling on the right side had subsided. On the 3rd the left parotid was much more swollen and inflamed, and there was distinct fluctuation. On the 4th the evening temperature was 101·6°, and the following day the left parotid was incised under ether and a quantity of thick pus situated deeply in the gland evacuated. On the 6th it was found that the tourniquet had caused a slough of the skin at the point of application. From this time the patient went on well. On Sept. 1st he sat up in bed for the first time. On the 7th he got up for four hours, and next day was taken out into the garden. On the 20th he walked a few steps. By Oct. 24th he could walk about the garden. After being up for six or eight hours he had slight œdema of the left leg. On Oct. 30th he was improving in every respect.

With regard to the treatment of this case, what chiefly led to compression being adopted was that the statistics of the results of this method were much better than that by ligature of the common iliac. The only objection that could be urged against it was that prolonged unsuccessful compression sometimes appears to make less favourable the prognosis of a subsequent operation for ligature. The statistics of the result of ligature of the common iliac, as given by Erichsen, show that the earlier cases were singularly successful. Later, however, the cases collected by Stephen Smith show only eight recoveries out of thirty-two operations, and in Kümmell's table forty-one are recorded to have died against fourteen who recovered. The chief causes of death appear to be exhaustion and hæmorrhage.

A most interesting point in the case was the occurrence after the operation of inflammation and suppuration of the parotid gland. The occurrence of such as a sequela or concomitant of injury or disease of the abdomen or pelvis is well recognised. Erichsen[1] says: "Inflammation of the parotid gland, frequently terminating in suppuration, has long been known to be a not uncommon complication of

[1] Surgery, 9th edit. vol. ii., p. 586.

injuries of the abdomen and pelvis, and has usually been regarded as pyæmic. Stephen Paget has, however, shown by a careful analysis of 101 such cases that this explanation is not altogether satisfactory. Of the 101 such cases, 10 followed injuries or diseases of the urinary tract; 18 injuries or diseases of the alimentary tract; 23 injuries or inflammation of the abdominal wall, peritoneum, and pelvic cellular tissue; 50 injuries, diseases, or operation on the generative organs; 27 of these being operations on the ovaries. After a very prolonged search Stephen Paget succeeded in finding only 13 cases of secondary parotitis arising from operations or injuries of other parts of the body, and in all of these it merely formed a part of general pyæmia. In the histories of the 101 cases the presence of septicæmia or pyæmia is mentioned in only 14, and in 7 only of the fatal cases were secondary centres of suppuration found elsewhere. The inflammation of the parotid commenced at very varying periods after the operation or injury of which it formed a complication. In 78 cases in which the fact was definitely recorded suppuration occurred in 45, the remainder undergoing resolution; as a rule, the parotitis was not accompanied by very severe fever, and rigors were very rare. Of the 101, 37 died, 13 from septicæmia or by pyæmia, and the rest from various causes not directly connected with the parotitis."

Milonas, at a meeting of the St. Petersburg Medical Society last year,[2] related an interesting case of swelling of the parotid gland occurring in a nervous and debilitated patient a few hours after it had become necessary to catheterise him while suffering from a prostatic abscess. In about a week, when it became necessary to empty the bladder, this was rapidly followed by the development of a suppurative parotitis of the other side. During the discussion which followed this communication, Balinsky related three cases of reflex parotitis which had occurred in his own practice, the patients being women who had undergone some operation for the relief of general troubles. Hilton Fagge[3] suggests, only, however, to dismiss the opinion as not having sufficient foundation, that this "metastatic" parotitis is perhaps, after all, due to dryness of the buccal mucous membrane leading to an obstruction of Steno's duct, with decomposition of the retained salivary secretion. He states that the prognosis is better if it occurs late as a secondary affection in any disease; if early, grave. The theories as to the cause of this curious condition are: First, that it is pyæmic. In the present case we may admit that, probably from the injury inflicted by the tourniquet, peritonitis was set up, and thus an opportunity was given for septic material to enter the circulation; but here, as in the records quoted above, we miss the general pyæmia which we should expect to follow such an occurrence. The other theory is that the parotitis is secondary to some disturbance in the innervation of the gland. In connexion with the above patient it was suggested by some who saw him that this might be due to the prolonged inhalation of bichloride of methylene. If this theory were correct, we should expect to get parotitis in the condition known as xerostomia, a complication which does not appear to be recorded. Looking at the records of cases that have been given, and considering the fact that there seems to be some special connexion between injuries and diseases of the abdominal cavity and inflammations of the parotid, it seems probable, seeing that in this case there was undoubtedly pressure on the nerves of the abdomen, that the parotitis from which the patient suffered was due to an affection of the still hypothetical connexions between the sympathetic ganglia and the parotid secretions.

Oxford.

[2] Medit. Pribav. R'mors. Sboz, April, 1889.
[3] Medicine, vol. ii., p. 305.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—The medical report of this institution for the year 1890 shows there were during the year 2386 in-patients, of which 501 were cases of rheumatism complicated with heart disease, 68 of diseases of the nervous system, 41 of the respiratory system, 5 of the circulatory system, 23 of the digestive system, and 221 of general diseases, which comprised anæmia, debility, erythema nodosum, eczema, psoriasis, Bright's disease, diabetes, blood-poisoning, cancer, spinal disease, morbus coxæ, old injuries, and uterine and ovarian disease, besides 14 accidents.

REMARKS ON THE ADMINISTRATION OF ANÆSTHETICS IN ORAL AND NASAL SURGERY.

BY FREDERIC HEWITT, M.A., M.D.CANTAB.,
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THE following remarks are not intended to apply to such brief operations as may be performed under nitrous oxide, but to those necessitating an anæsthesia of longer duration. The administration of the anæsthetic for operations within the upper air passages often requires considerable forethought and judgment; and it is therefore hoped that a few practical suggestions may not be without interest.

1. *Choice of anæsthetics.*—Putting exceptional cases aside, it is best to place the patient well under ether, and to keep up the anæsthesia, if necessary, with chloroform, great care being taken not to substitute the latter for the former anæsthetic till the patient commences to show signs of emerging from the ether narcosis. By administering nitrous oxide, or a small quantity of the A.C.E. mixture, before ether, the disagreeable effects of the latter anæsthetic may be obviated. Ether has many advantages in these cases. Firstly, it is possible to charge up the patient, so to speak, with such a quantity of ether that for many operations no more of this or of any other anæsthetic is necessary. Secondly, there is as a rule no objection to the etherised patient being well propped up, or even in the sitting posture should the operator desire it. Thirdly, should any difficulties in respiration (dependent upon the presence of morbid growths &c. within the nose or mouth) arise during the administration of ether, there is not that liability to circulatory depression which undoubtedly exists during the use of chloroform under similar circumstances. Should the anæsthesia from the dose of ether be of insufficient duration for the performance of the operation, unconsciousness should be maintained by small quantities of chloroform, given with the precaution already referred to.

2. *Position of the patient.*—This should primarily depend upon the nature of the operation and the convenience of the operator. Very often, however, the arrangement of the patient is left to the anæthetist, the operator having no special wish in the matter. Under these circumstances the administrator of the anæsthetic should place the patient in that position which is most favourable for the escape of blood. Apart from the inconvenience caused by the presence of blood during these operations, the patient may be saved much after discomfort from nausea or vomiting if a little care be taken to prevent blood from being swallowed. When very little hæmorrhage is expected, the position of the patient becomes a matter of small moment, but it is not so under opposite conditions. When considerable hæmorrhage is anticipated one of two positions should be chosen if circumstances permit: (1) The etherised patient should be slowly raised into the sitting posture, and his head and shoulders thrown well forwards; or (2) he should lie upon his side with one arm under him, and his head being near the edge of the table his face should be directed downwards; the mouth being well opened by some form of gag in either case. The former position, originally suggested, I believe, by Mr. Braine, is an excellent one for scraping away post-nasal adenoids; it should only be adopted, however, under ether—not under chloroform. The latter position may with advantage be chosen for such cases as the removal of nasal or naso-pharyngeal polypi.

3. *Points to be observed in administering the anæsthetic.*—Should there be complete or nearly complete nasal obstruction, it is a good plan to place a small mouth gag between the teeth before commencing the administration. Partial nasal occlusion is liable to become complete during anæsthesia by reason of increased vascularity of parts. If this simple precaution be not adopted, it may become necessary to forcibly open the mouth during the administration—a procedure sometimes attended by difficulty, more especially in vigorous subjects and in those with accurately meeting teeth. When respiration prior to the administration is in any way embarrassed, either from the presence of morbid growths or other causes, the anæsthetic should be given very cautiously and the breathing watched. I have lately

brought before the Royal Medical and Chirurgical Society many facts in connexion with this branch of the subject, and shall therefore refrain from any further remarks here.

4. *Points to be observed during the performance of the operation*.—When the required degree of narcosis has been reached, the mouth should be well opened by some form of gag. The one which I find best suited for general use is here figured. It is a modified Mason's gag, possessing two

small tubes for the transmission of chloroform vapour to the back of the mouth. The rubber exit tube of Junker's chloroform apparatus is attached to the bulbous extremity of one of the mouth-tubes shown in the engraving. Chloroform vapour may thus be made to pass in the direction of the arrows. It will generally be found advisable to attach the indiarubber tube of Junker's apparatus to that arm of the gag which comes in contact with the upper teeth. The mouth-tubes of the gag are bent slightly backwards at their non-bulbous ends, in order to throw the vapour to the back of the mouth. The gag shown has arms sufficiently long to keep the mouth of an edentulous patient well open, and the clip arrangement for keeping the arms apart is superior to the ordinary screw, as it is simpler to manage, and takes but a fraction of a second to adjust.[1] The gag can, of course, be used as an ordinary mouth gag—i.e., without being attached to a chloroform inhaler.

In cases in which there is very free hæmorrhage, it is best not to maintain very deep anæsthesia, the abolition of corneal reflex not being necessary as a general rule. In very delicate operations, however, as well as in those in which the bleeding is slight, deep anæsthesia should be kept up throughout the operation.

George-street, Hanover-square, W.

[1] Messrs. Krohne and Sesemann of Duke-street, Manchester-square, are the makers of the gag.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF MYXŒDEMA.

BY A. M. STALKER, M.D.,
PHYSICIAN TO THE DUNDEE ROYAL INFIRMARY.

THE following case of myxœdema seems worthy of being placed on record.

Mrs. C——, married, forty years of age, is the eldest of a family of nine, all of whom are healthy. She is the mother of four children, whose ages run from seventeen to eight, and all of whom appear in sound health. No miscarriages. The husband is alive, and appears strong and active. She has lived during the greater part of her life in the country. Has had poor health during the last fifteen years. About that time the sight of the left eye began to fail, with severe headaches and pain in the affected eye. The failure passed into complete blindness five years ago. Two years before that the sight of the right eye gave way with similar symptoms, and this, too, has resulted in all but complete blindness. About four or five years ago, perhaps longer (it is always difficult to be sure of the time within a year or two of the commencement of a myxœdema), swelling began about the face and limbs, with change of voice and growing irritability of temper. Since then the general strength has become more enfeebled, though the loss of sight is still her chief complaint. From the commencement of the eye trouble she has taken large quantities of iodide of potassium. At present (October, 1889) her condition is as follows:—She has myxœdematous facies; teeth good; hair thin and wiry; skin dry, her stockings sometimes being emptied in the evening of quite a quantity of branny scales; hearing good; eye symptoms peculiar. In the left eye iris is grey and blurred, adherent all round; pupil about 2 mm. in breadth; fundus cannot be illuminated; no vision in this eye. In the right eye iris slightly blurred, adherent at one side; pupil about 4 mm., and can be dilated with atropine to 6 mm.; good view of the fundus; disc is dead bluish-white with large posterior staphyloma surrounding it on all sides, on an average double its own breadth; vessels normal; at extreme periphery large patches of black pigment; in the middle distance similar smaller patches, situated in the midst of brilliantly white patches of choroidal atrophy; only vision possible is that she can discern the position of the window in the room, or of the lamp in the evening. The other symptoms present nothing novel. She is subject from time to time to hæmorrhages from the bowel, probably from the rectum. The mental condition is fair; querulous and garrulous, but no illusions or suspicions. Disturbing dreams, but no morbid terrors.

The interest of this case lies in its associations, first, with chronic irido-choroiditis, and, secondly, with the long-continued use of iodide of potassium. With regard to the former very little can be added by way of remark to the mere fact of the association. It is tolerably certain that there is no syphilitic taint in the case, and apart from syphilis, the relations of irido-choroiditis are little known and ill defined. The fact of the long use of iodide of potassium, on the other hand, gives rise for rather more speculation. Mr. Hutchinson in his "Archives of Surgery" (vol. i., p. 142) dwells for a moment on this as a possible factor in a case of acromegaly, but does not press it. There is one consideration, however, which may specially justify the observation in a case of myxœdema. The use of iodine in the treatment of true goitre is always mentioned in the books, though the proof of its efficacy turns out on inquiry to be very doubtful. But a tolerably large body of testimony is given to the benefits of inunction with biniodide of mercury ointment in simple bronchocele; and the "discutient" effect of this, taken along with the general consensus that iodine in some form is beneficial in all enlargements of the thyroid, is a clear enough indication of an effect of the drug on one or other of the elements of the gland. And it is precisely in such a disease as the form of irido-choroiditis described above that we may hope to see what, if any, are the results of continued saturation of the system with iodine. The ophthalmic surgeon is confessedly at a loss what to do apart from the use of iodide of potassium, and even when there is no hope of checking the disease the treatment is pursued through long years with the vague expectation that its course is, at any rate, being slowed. In a case treated in this way the occurrence of symptoms indicating atrophy of the thyroid is worth noting.

Dundee.

FOREIGN BODY LODGED IN THE ORBIT FOR FORTY-SIX YEARS; REMOVAL.

BY C. HIGGENS, F.R.C.S.

MR. H——, aged fifty-two, consulted me on Aug. 20th, 1890, for ulcer of the cornea of the left eye. I found that the ulcer was due to exposure caused by retraction of the upper eyelid, which was firmly fixed by a puckered cicatrix to the roof of the orbit some distance behind its margin. Bad smelling discharge escaped from a sinus near the centre of the cicatrix. A probe passed through the sinus came in contact with a rugged surface. I noticed a scar at the outer margin of the orbit, and on inquiring about it Mr. H—— casually remarked that it was made by his falling on a knife when six years of age. The blade of the knife—or the knife, as he described it—was never seen afterwards, but the wound healed without giving him any trouble. He, however, admitted that there had been discharge for many

years, about which he had not troubled himself. I told him that I believed the knife-blade was still in the orbit, and arranged to make an exploration. On the following day I cut down through the cicatrix and after some difficulty removed a piece of much-corroded metal, evidently the remains of a piece of the knife-blade, $\frac{5}{16}$ in. in length, $\frac{1}{16}$ in. in breadth at its wider end, and $\frac{1}{32}$ in. at its narrower extremity. It had evidently been fixed partly in the orbit and partly in the frontal sinus. I cleared out a quantity of rust and pieces of rough bone, closed the wound, leaving a drainage-tube at either end, and united the margins of the eyelids. The patient had no bad symptom; at the end of a fortnight the wound was soundly healed and there was no discharge.

Brook-street, W.

TREATMENT OF ENURESIS.

By W. E. STEAVENSON, M.D. CANTAB., M.R.C.P.,

IN CHARGE OF THE ELECTRICAL DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.

THE numerous questions which have recently been addressed to THE LANCET on this question, and the annotation which appeared in the issue of November 22nd (p. 1111), have induced me to again bring before the profession the undoubted benefit which is derived from the treatment of enuresis by electricity. I wrote a short paper on Troublesome Frequency of Micturition[1] as far back as 1883, and I have had no reason to alter the opinions there expressed. I agree with the opinion of Dr. Kupke of Posen, mentioned in the annotation above referred to, that the cause of enuresis is, among others, due to "diminished activity of the vesico-spinal centre in the lumbar part of the cord, or partial anæsthesia of the sensory nerves of the bladder, both of these conditions preventing prompt information being conveyed to the cortex of the cerebrum when the bladder is becoming full." Cases of incontinence of urine from different causes are frequently referred to me for electrical treatment, and the greater number of them have been cured. Nine cases are mentioned in the St. Bartholomew's Hospital Reports for 1883, pp. 245, 246; and thirty-one cases in the Reports for 1886, p. 85. The affection is by no means confined to children. It is a frequent complaint in young women, and in married women who have received some injury during parturition. Some cases have been due to pressure on the neck of the bladder during pregnancy, especially when associated with anteflexion of the uterus; others to dilatation of the urethra for exploration of the bladder. Several patients were unable to retain their urine when in the erect position or when making the slightest exertion, such as going up stairs, lifting weights, and even when laughing or crying. Some are similarly affected when riding on horseback. I do not remember any of these cases which have failed to be cured by electricity. I am not including the cases of old women in whom violent bronchitic cough is so often accompanied by an escape of urine, although these would also probably improve.

The reason why this class of case can be so successfully treated by galvanism is in my opinion due to the fact that the whole of the lower nervous supply of the bladder and sphincter vesicæ can be so easily included in the circuit. My method of treatment is not exactly the same as that followed by Guyon and Unverricht, described in the annotation alluded to above. It is seldom that I have to pass an electrode into the urethra; and it seems to me that failure will often ensue if the second electrode is "moved from place to place over the pubes." The tendency of all electrical currents is to take the shortest route possible to complete the circuit, always of course choosing the road offering the least resistance. If one electrode is placed on the lower dorsal spine and the other above the pubes, the sphincter vesicæ is almost completely without the circuit, and then receives very little direct influence. In cases where there is weakness of the sphincter, unless an electrode is placed in the urethra itself, the most advantageous position for the second electrode is the perineum. It is seldom that I use the interrupted current, although it is strongly recommended by Erb. My usual plan is to place a pad connected with the negative pole of a continuous current battery over the lower dorsal region of the spinal column, and a small button electrode on the perineum. I advise that the electrode connected with the negative pole should be the fixed one, because of the sensitiveness of the parts to which the second electrode has to be applied, and the small space, and therefore the difficulty experienced in moving the electrode about. In all cases a very weak current is used, and therefore the fixed negative electrode, being of wide surface, does not painfully affect the back; whereas, if the current were reversed and the button electrode in the perineum made negative, a weaker current still would have to be used to enable the patient to bear it. Therefore, in these cases we get the greater advantage by placing the electrodes as I have mentioned. In the treatment of atony of the blader, incontinence of urine, or undue frequency of micturition, I usually employ the current for eight or ten minutes every day or every other day; the great majority of cases only requiring about eight or ten applications. In some cases when galvanism fails the interrupted current may be employed with success. It is then best to place an electrode in the urethra.

Mansfield-street, W.

[1] Brit. Med. Jour., Jan. 6th, 1883, p. 9.

TRAUMATIC ENCEPHALO-MENINGOCELE.

By HARRY BURTON, M.R.C.S., L.R.C.P. IREL., &c.

ON Aug. 7th I was sent for hurriedly to see A. H——, aged eight, who had been knocked down by a swing boat. The following were her injuries: Compound fracture of frontal bone, about two inches above the centre of the right orbit, with contusions over the occipital bone of the same side. There was a clean-cut wound over the side of the fracture, one inch and a half long. The fracture was circular, but not depressed. It appeared that the edge of the swing boat knocked her down, causing the fracture, and the contusion was caused by the head striking a peg in the ground. As the girl was conscious on my arrival, and recovering nicely from the shock, and as there were no symptoms of compression, I simply sutured the wound and dressed it with salicylic wool. The wound healed by first intention, after which a peculiar train of symptoms developed. The skin began gradually to bulge over the fracture, and a tumour formed, pulsating and semi-translucent. This increased in size until it became as large as a walnut, the integuments gradually thinning over it, but remaining intact. By exerting pressure upon it it gradually disappeared, and a circular opening about the size of a two-shilling-piece could be felt in the bone, corresponding to the situation of the fracture. The child suffered from convulsions and strabismus, and no pressure could be borne without a convulsion occurring. I aspirated, but only succeeded in drawing off a small quantity (about two drachms) of cerebro-spinal fluid. I found some cerebral substance on the needle, thus showing that brain was protruding. Strange to say, the girl improved after the aspirating, and Mr. Wright of Manchester having seen her and again advised pressure, it was applied very gradually, with success, the tumour gradually disappearing and the hole in the bone becoming partially filled with fibrous tissue, until now, with the exception of slight weakness of vision and slight failure of power of the left arm, the girl is enjoying good health and attending school regularly. She wears a silver plate over the site of injury as a precaution. Abscesses formed over the occipital region; they were laid open and necrosed bone gouged away, Mr. Jenkinson of Marple Bridge kindly giving chloroform on three occasions. During the healing of these great difficulty was experienced in keeping down the large flabby granulations which grew so luxuriantly.

This case appears to be unique. It was certainly not the hernia cerebri of books, as there was no open wound, the skin having healed, and, although much thinned, remaining sound. It also differs entirely from the traumatic meningocele described by Mr. Clement Lucas and Mr. Golding Bird.[1] The only way to account for it is that the fractured bone, becoming necrosed, must have been absorbed, and the membrane and brain substance were protruded through the opening. I may state that the face and

[1] Guy's Hospital Reports for 1876, 1878, 1881, 1884, and 1889.

left upper extremity were chiefly affected by the convulsions, showing that the inflammatory processes must have involved their cortical centres.

Marple.

EXTRA-PERITONEAL HÆMORRHAGE DURING PREGNANCY; CÆSAREAN SECTION; DEATH.

By SIDNEY A. BONTOR, M.D., B.S.

A SHORT time since I was called at 10 A.M. to K. L——, the wife of a labourer. She was a tall and ill-fed woman, aged forty-three, and eight months pregnant with her ninth child. I was told that she had been quite well the previous day, but had felt some abdominal pain during the night, that this had passed off towards morning, that she had prepared and partaken of breakfast, and was attending to her domestic duties as usual, when she was seized with a sudden and very violent pain in the right side, causing her to scream out and almost fall down. She was assisted up to the bedroom, and I was sent for. I found her blanched, with cold and clammy skin and almost imperceptible pulse. She was quickly undressed and put into bed. On examination a well-marked resistance was felt in the right iliac region quite distinct from the uterus, while feeble contraction of this organ could be felt; the abdominal walls, except in the region indicated, were not at all tense, and manipulation of the abdomen did not produce pain; per vaginam, there was bulging of the posterior cul-de-sac, and the cervix was high up and soft, but not dilated. I concluded that perforation either of intestine or of a vessel had taken place, that what chance there was of saving the patient's life was offered by immediate abdominal section, and that should this be unsuccessful in respect of the woman, at all events there was considerable hope of saving the child. I therefore had preparations made for the operation, and in the meantime called in my friends Drs. Mackay and Penny; they agreed as to the necessity for the operation, and very kindly assisted me with it. An exploratory incision was first made, but no blood or fæcal matter was found in the peritoneal cavity, and the peritoneum appeared natural. The incision was therefore extended, when the right broad ligament was seen to be filled with blood-clot. The woman was sinking rapidly, so we abandoned the hope of saving her, and decided to remove the child, which, however, on removal we found to be already dead. Unfortunately in opening the uterus I came upon the placenta, and the hæmorrhage which ensued, though but slight, was sufficient to carry off the patient. An examination of the abdominal cavity through the wound showed that extensive hæmorrhage had taken place outside the peritoneum, and had spread from the under surface of the liver to the pelvis, forming collections about the kidney and in the cavity of the pelvis, and distending the right broad ligament, while it had separated the peritoneum from the cæcum and ascending colon. The source of the hæmorrhage could not be found, and, as far as we could trace, the vessels and viscera were natural, with the exception that in the anterior wall of the uterus there was a small cancerous nodule about the size of a hazel nut. There were no varicose veins either of the legs or in the broad ligament. Permission for a necropsy was unfortunately not obtained. Notwithstanding the unfavourable result, the case appears to be of interest, not on account of anything exceptional in the operation, but from the large amount of hæmorrhage and from its sudden appearance in a woman whose health up to the occurrence had shown no unusual change. In view of the cancerous nodule found in the uterus, it is possible that a growth which we were unable to make out had eroded one of the vessels. The death of the child was probably due to the sudden diminution of the blood-supply to the uterine sinuses, for it was well formed and had apparently been dead but a very short time.

Great Berkhamsted.

WATER-SUPPLY, ROTHERHAM.—It has been found necessary to curtail the night water service, partly in consequence of a deficiency during the past month, amounting to nearly 41,000,000 gallons in the Ulley Reservoir, Rotherham, together with the waste, which has been very large from letting the water run from household sinks and taps throughout the night to obviate the freezing of the pipes.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

A CASE OF OPHTHALMOPLEGIA EXTERNA AND INTERNA; REMARKS.

(Under the care of Dr. FERRIER.)

DURING the last few years much has been added to our knowledge of the various affections which are manifested in the eyes of patients suffering from locomotor ataxy. In this case a condition of paralysis of the extrinsic and intrinsic muscles of the eyes was found with optic atrophy in a man not yet presenting the characteristic ataxic gait. Dr. Berger[1] has recently written on the visual disturbances in tabes dorsalis, and given an analysis of 109 cases. He says that the cases occurring in the very young and in the very old are exempt from grave ocular complications, and that in those with a history of syphilis the disease begins with cerebral symptoms. Optic atrophy usually began in the ataxic stage, and was more frequent in the cases with paralysis of the ocular muscles. Paralysis of these muscles existed in 38 per cent., about equally divided between the syphilitic and those in whom no evidence of the disease could be found. Dillman, in an inaugural dissertation,[2] says that among 100 cases of tabes paralysis of the ocular muscles was present in 41, and optic atrophy in 42. There was a preceding syphilitic history in 68 cases. Dr. Howard[3] has recorded a case of ophthalmoplegia externa and interna associated with tabes dorsalis, bulbar paralysis, and loss of vision and hearing. We refer our readers to Dr. Ferrier's remarks on the case. For the following report we are indebted to Dr. G. Francis Ewens, medical registrar.

G. T——, aged forty-three, was admitted into King's College Hospital under the care of Dr. Ferrier on Oct. 9th, 1890. He has been for the last twenty years a Covent-garden porter, and was for five years previously to that a soldier. He is married, and has had two healthy children. His father and mother were both healthy, and died, one at ninety and the other at sixty years of age. There is no history of insanity or any nervous disease in his family, but two out of his three sisters died of phthisis. The patient, when a boy, suffered from severe headaches, but since that time has had no illness whatsoever, except about twenty-four years ago, when he contracted syphilis. He has never been intemperate. Six months before his admission to hospital (May, 1890), when feeling quite well, and walking in the market with a load on his head, he suddenly felt sick and vomited, and was obliged to go home to bed, remaining there three days. Several times since he has had similar sudden attacks of vomiting, lasting about the same time, accompanied with intense epigastric pain of a griping character, shooting pains down both legs, constipation, and a burning pain during defecation. For about the last six months he had also suffered from diplopia and occasional dizziness, both of which he now complains of constantly, together with an inability to raise the eyelids. He has also during the same time been subject to sudden attacks of shooting pains, very acute and intensely painful, down both legs, usually worse at any changes of the weather; but he has never had any difficulty in walking at any time, or perceiving the ground with his feet, nor has he had any trouble with his bladder or rectum. When examined, the patient presented the appearance of a fairly well nourished man, not anæmic; complaining of sudden attacks of very severe vomiting coming on at variable intervals; of constant sense of constriction, "as though ropes were tied round" his trunk from axillæ to umbilicus. This feeling is much aggravated during the attacks of vomiting, and is then accompanied by intense epigastric pain, con-

[1] Archives of Ophthalmology, vol. xix., No. 4. Sajous, vol. iv., B. 131. [2] Leipsic, 1889.

[3] Internat. Journal of the Medical Sciences, p. 238, 1889. See also Galezowsky, Archives of Ophthalmology, Sept. 1889. Parinaud: Recueil d'Ophthalmologie Oct. 1889.

stipation, and pain in the rectum during defecation. He has no headaches, and has never had any convulsions. There is ptosis of both eyelids, most marked on the left side. Both pupils are very large, the right more so than the left; neither react to light, accommodation, or cutaneous stimulation. The eyes are slightly divergent, and cannot be moved in any direction whatsoever, except slightly downwards and outwards. Both optic discs are in a condition of grey atrophy. The sight is defective, especially for near objects. There is no facial palsy or weakness of the muscles of mastication, the movements of the tongue and palate are normal, and speech and swallowing are perfect, as are also all movements of the arms, hands, fingers, thighs, legs, feet, and toes. He can perceive and accurately localise the slightest touch on the face or any part of the limbs and trunk. He can perceive a painful impression and hot and cold, and knows with eyes closed the position in which any of his limbs may be placed. The knee-jerks are both present, though not always easy to demonstrate, being only obtainable while the patient strained. All the superficial reflexes are present and normal. There is great wasting of the muscles of the legs, as also of the palmar interossei, and to a less extent of the thenar and hypothenar eminences; but they all react to a faradaic current and normally to galvanism. The heart and lungs are normal, and the urine is 1015 specific gravity, and contains no albumen or sugar. He walks steadily, but has some difficulty in maintaining his equilibrium when keeping to one straight line or standing with the eyes closed. While in the hospital he has had two severe attacks of vomiting, with intense epigastric pain and constriction, causing him to groan so loudly and continuously as to require his removal from the general ward to prevent his disturbing the other patients. The first of these attacks began on Nov. 4th and lasted six days, during which time subcutaneous injections of morphia had to be frequently administered. At the end of this time the crise gastrique had quite subsided, and the patient again felt comparatively well, and was able to resume his usual place in the ward. Another attack of a similar nature occurred on Dec. 3rd, which lasted five days.

Remarks by Dr. FERRIER. — In a clinical lecture on this case I remarked on the common association of ophthalmoplegia with other affections of the nervous system, particularly with tabes, and occasionally with muscular atrophy more or less general. The present case is an example of almost complete ophthalmoplegia externa and interna, the only ocular movement persisting being a slight downward and outward movement of the eyeballs. Under ordinary conditions, except for this movement, the eyeballs are absolutely motionless, and the eyelids are incapable of being raised. It was observed, however, during the second crise gastrique which the patient had in the hospital, that he became able to raise the right eyelid and fully expose the eyeball. This, however, was only transitory, and the ptosis returned when the attack subsided. The case is in all probability due to degeneration affecting the nuclei of the ocular muscles, and not peripheral lesion, under which condition similar symptoms may arise. Associated with this there were clear indications of tabes. The patient is not obviously ataxic, nor are the knee-jerks abolished, but the grey atrophy of the optic discs, the absolute immobility of the pupils, the lightning pains, epigastric constriction, and the crises gastriques are all symptoms characteristic of tabes. And the probability is, as in a recent case reported by Peterson (*Neurologisches Centralblatt*, Oct. 1st, 1890), that the degeneration will advance to well-marked ataxy. In this case also there are indications of degenerative changes in the nuclei of the spinal nerves similar to those of the ocular nerves, as shown by the extensive wasting of the intrinsic muscles of the hands, and those of the lower extremities, particularly of the legs. The etiological factor in this, as in most cases of the kind, is undoubtedly specific disease.

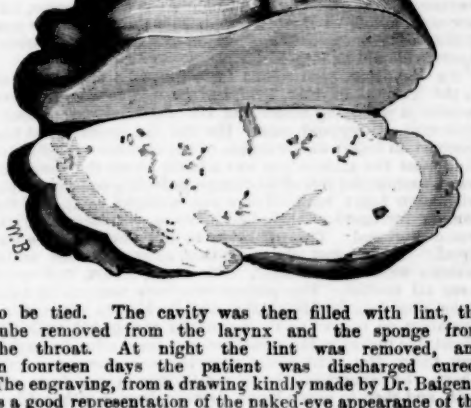
ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

A CASE OF TUMOUR OF THE PALATE; OPERATION; REMARKS.

(Under the care of Mr. PAGE.)

ADENOMATA of the palate are not growths frequently met with in surgical practice—indeed, in 1886, Mr. Hutchinson[1] remarked on bringing forward a case that up to that time the Pathological Transactions did not appear to contain any reference to adenomata of the palate. Since then several examples have been brought before that Society or reported elsewhere. This case is an example of that form of growth situated, as they appear most frequently to be, on the left of the middle line, encapsuled, without ulceration of the covering mucous membrane, and of slow growth. For the report of this case we are indebted to Mr. T. M. Kempster, house surgeon.

M. H——, a puddler, aged forty years, was admitted, under the care of Mr. Page, on Dec. 16th, 1889, complaining of difficulty in breathing, more particularly at night, and of inconvenience in swallowing. His symptoms had existed for two years, but it was only three weeks before admission that he became aware they were due to a growth in the mouth. Upon examination, the isthmus faucium was seen to be occupied by a tumour the size of a hen's egg, springing from the left side of the throat. It was firm, regular, and fixed. The finger could be passed readily round it on the right side, but its deep connexions could not be defined. The mucous membrane was stretched over it and thinned, but there was no sign of ulceration. No enlarged glands could be felt. On Dec. 20th, the patient having been placed under chloroform, laryngotomy was performed and the throat plugged with sponge so as to prevent blood finding its way into the air passages. The mouth was kept open with a gag and an incision made through the mucous membrane over the centre of the tumour. The growth was readily enucleated from the submucous tissue in which it was situated with the finger. Free general oozing from the bed of the tumour followed, but no vessel required



to be tied. The cavity was then filled with lint, the tube removed from the larynx and the sponge from the throat. At night the lint was removed, and in fourteen days the patient was discharged cured. The engraving, from a drawing kindly made by Dr. Baigent, is a good representation of the naked-eye appearance of the growth. Microscopically, spindle cells were found sparsely distributed among tissue closely resembling glandular tissue. On Oct. 20th, 1890, the patient presented himself, and there was no return of the growth.

Remarks by Mr. PAGE. — In the St. Bartholomew's Hospital report for the year 1886, a number of cases similar to the above have been tabulated by Mr. S. Paget under the head of Adenomata, which he tells us, though historically suspicious, are clinically "innocent as the babe unborn." The subsequent history, so far as it goes, tends to confirm Mr. Paget's observation that the growths do not recur.

[1] Path. Soc. Trans., 1886, p. 492.

KASR-EL AINI HOSPITAL, CAIRO.

LIGATURE OF THE ABDOMINAL AORTA FOR RUPTURED ANEURYSM OF THAT VESSEL; DEATH.

(Under the care of Mr. H. MILTON.)

THIS case is a most important contribution to our literature on the ligature of large arteries in their continuity, making only the eleventh instance on record of the application of a ligature to the aorta, and the first occasion on which the artery has been ligatured for aneurysm involving only the vessel itself. The methods which may be em-

ployed are the transperitoneal and the post-peritoneal, and it will be obvious that in this instance the encroachment of the aneurysmal tumour to the left prevented the employment of the latter, and, further, the fact that escape of blood was rapidly taking place from the ruptured sac into the cellular tissue around made the selection of the quicker method of operating imperative. The patient was not under observation for a long time before the sac ruptured, but the diagnosis had been made, and evidently the condition carefully considered, for Mr. Milton has given us a plan of treatment which he had proposed to try had no untoward symptoms developed, and which could only be carried out where there is a sufficient length of vessel above and not involved in the aneurysm. The plan suggested is a bold one, and worthy of careful consideration should a similar case present itself for treatment. There are, however, many objections which may be urged against it, and which will present themselves to the minds of those reading the case. Should any surgeon after due consideration carry out the plan suggested—that of temporary compression against the spine—probably kangaroo tendon, which would not require to be removed had the purpose been fulfilled for which it was introduced, would answer best, for drainage-tube would be difficult to extract. That the operation of ligature of the abdominal aorta is a most formidable one there is no doubt, but that it is necessarily a fatal operation is hardly proved by the evidence before us. True, all the cases on record died after the operation, and, with one exception, within a few hours. Monteiro's[1] patient, however, lived for ten days and died from secondary hæmorrhage; but when we recollect that the case occurred in 1842, was treated by the long silk ligature, and that although the method was the post-peritoneal one suppuration followed, we cannot compare the conditions with those which would obtain now were this vessel ligatured. Abdominal aneurysm[2] is a very fatal disease, and although other kinds of treatment have been employed sometimes with success, and few cases admit of ligature, we hardly think that the possibility of the successful application of the hidden absorbent ligature should be forgotten.

An Egyptian, aged about forty-five, who was admitted to the hospital in July, 1890, had noticed for some sixteen months a pulsating tumour in his abdomen, accompanied by severe paroxysmal pain. He had had syphilis, but had received no injury in the region of the tumour. Slightly to the left of the middle line and a little above the umbilicus was a tumour the size of an orange, pulsating and expanding with each heart beat. There was a slight bruit, and the tumour increased slightly in size when the aorta below it was compressed. The pulsation in the two femorals was equal. He showed old syphilitic scars, and his radial arteries were a little rigid. His lungs, heart, and urine were all normal. The patient was very anxious to have something done for him, and it was decided to attempt an operation as follows:—To incise the abdominal walls for about five inches in the middle of the linea alba, to expose and incise the peritoneum covering the aorta one inch above the aneurysm, to separate the aorta from the vein, and then to pass a blunt director close on either side of the vertebræ, and to force it gradually backwards through the tissues until its point could be cut down on in the back, then to make a similar passage on the other side; then to pass a small drainage-tube along the two channels made by the director, forming a loop across the aorta, the two ends of the tube presenting in the back on either side of the vertebral column—the tube being in position to close the peritoneum over it with catgut stitches, and finally to completely close the abdominal incision. The idea was to leave the patient a few days, and then to compress the aorta against the vertebral column by traction on the two ends of the drainage-tube. The amount of pressure to be applied and the period of its application were to be regulated by the effect produced on the patient.

On Thursday morning (July 3rd), however, before any treatment had been commenced, the patient awoke with a severe pain in his left side, and when seen somewhat less than an hour later, it was evident that the aneurysm had ruptured. The rounded tumour which had formerly existed could no longer be differentiated, but formed part of a pulsating mass extending from the umbilicus to the lateral limit of the abdomen, filling up the whole left hypochondriac region. The patient was watched for a few minutes, during which the pulsating tumour increased slightly, the patient showing the usual signs of severe hæmorrhage. Abdominal section was at once performed. An incision five inches long was made in the linea alba, its centre being a little above the umbilicus. The omentum and intestines were pushed aside, and the right side of the aneurysm exposed. A small incision was made in the peritoneum covering the aneurysm, and a finger passed into this easily made its way under the peritoneum, and guided by the aneurysm to the aorta readily recognisable by its size and its pulsation. It was at once compressed, and, the compression being maintained, it was isolated for about one inch above the aneurysm, the exposed portion feeling quite healthy. An aneurysm needle was passed round the aorta without difficulty about eight lines from the origin of the aneurysm and the vessel tied with thick silk. The peritoneum was dry sponged and the wound closed in the usual way without drainage. As the whole of the effused blood was found to be behind the peritoneum, it was left untouched. The time occupied by the operation from the first incision to the completion of the dressing was twelve minutes. Pulsation ceased immediately after ligature in the aneurysm, in the effused blood, and in both femorals. The patient was kept going during the operation with ether and brandy. He rallied about an hour later, and was kept alive with some difficulty for just twenty-four hours, and then died of anæmia and shock. He complained of intense pain and tingling in both legs until death, which occurred somewhat suddenly. He passed 13 oz. of urine quite free from albumen or blood.

Post mortem the aneurysm was found to be purely of the aorta, its lower limit about three-quarters of an inch above the bifurcation and its upper limit one inch and a half below the renal arteries, both of which were well above the point of ligature. The aneurysm presented a small rupture just at the left edge of its under surface, and from this point very nearly 4 lb. of blood had been poured out behind the peritoneum, entirely obliterating the left renal fossa. All the organs were anæmic, but otherwise healthy. The kidneys showed no signs of change whatever.

[1] Rev. Méd.-Chir. de Paris, 1852.

[2] The cases in which ligature of the aorta has been employed have been mostly of iliac and inguinal aneurysm; once for hæmorrhage after gunshot, once for hæmorrhage after nephrectomy.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Media for Cultivation of Tubercle Bacillus.—Chylous Ascites.—Pelvic Hydatid Obstructing Ureters.—Acute Verrucose Aortitis.—Dermal Cysts.

AN ordinary meeting of this Society was held on Jan. 6th, the President, Dr. Dickinson, being in the chair.

Sir HUGH BEEVOR read a note on Media for Cultivation of the Tubercle Bacillus. The results he had obtained showed how diverse might be the media that could be employed, and how wide the variations of temperature in which the bacilli would grow. His observations on potato cultivations agreed with those of other observers—that the growth was very slow, there being from twenty days to a month before the first sign of growth appeared. It was stated that cultivations on the potato for three generations did not diminish the virulence of the organism. He found that the bacilli grew in broth to which glycerine had been added at a temperature lower than they did on potato or in glycerine agar-agar, and he showed tubes which had been kept at a temperature not exceeding 60° F. Bacilli cultivated in glycerine agar-agar to which corrosive sublimate in the proportion of 1 in 200,000 had been added were hindered slightly in their growth. This proportion of perchloride when compared with the average body weight of a man equalled from five to six grains. The demonstration of the wide range of temperature at which the organisms would grow was interesting in suggesting that their habitat was probably wider than had been supposed.—Dr. CROOKSHANK said that the paper had involved a very great amount of labour, the growths being very slow and requiring constant watching. The results of inoculation of animals with these subcultures when published would prove of great interest.

Dr. FRED. J. SMITH read notes of a case of Chylous Ascites in a woman aged sixty-seven. She had suffered

from dysmenorrhœa all her life and occasionally with dyspeptic symptoms. The final illness began in 1889 with similar dyspeptic trouble, culminating in ascites in July, 1890. Masses of cancer were thought to be present during life, both abdominal and pelvic. The necropsy revealed primary growths in both broad ligaments, chronic peritonitis, with small nodules of new growth. The liver was much displaced, its capsule thickened, and two large stones blocked the cystic duct. The thoracic duct was perfectly healthy. Dr. Smith was inclined to attribute death to a simple, not a malignant, chronic peritonitis, basing his belief on—(1) the comparative numerical deficiency of neoplastic nodules; (2) the verified presence of a simple irritant; (3) the long duration of the case.—Mr. SPENCER inquired if the fæces were examined for fat, and if the intestinal wall had been stained with osmic acid. — Dr. MAGUIRE said that a considerable proportion of cases of chylous ascites had been associated with carcinoma of the peritoneum, and dilated lymph vessels had been demonstrated near cancer nodules. Two distinct varieties had been described, and in one of these the milkiness of the fluid appeared to be due to the cellular elements derived from breaking down malignant growth. He had known of an instance in which a rupture of the receptaculum chyli had been found post mortem —The PRESIDENT asked if the molecular basis of chyle was found in the fluid. He supposed that the condition was due to obstruction to the lacteals in the mesentery or in its neighbourhood.—Dr. SMITH, in reply, said that under the microscope there was seen finely divided fat, with a few leucocytes. The fæces had not been examined, and there was no suspicion of filaria as a cause.

Mr. HURRY FENWICK detailed the history of a Large Hydatid Cyst of the Bladder. The patient, aged twenty-five, had been treated for six months for persistent headache, occasional morning vomiting, and increasing emaciation. Six days before his death great irritability of the bladder, culminating in suppression of urine, supervened. A large, tense, semi-fluctuant tumour was discovered on rectal examination, filling the entire true pelvis. It was separated from the prostate by a narrow interval, but it had pressed the vesiculæ seminales and vasa deferentia backwards. The bladder had been dislocated upwards and to the right, and a catheter could be passed after a slight hitch at the prostate, but the bladder was found empty. It was obvious that both ureters had been strangled at the brim of the true pelvis by the tumour. In order to temporarily relieve the obstructive suppression, he aspirated the cyst per rectum and drew off some ounces of hydatid fluid. The ureters immediately emptied their accumulated contents, for two ounces of urine were drawn off at once by catheter and the patient passed thirty ounces voluntarily during the next day. It was then arranged to attack the cyst supra-pubically, but a few hours before the proposed operation the patient fell back in bed, and died of suppression of urine. Post mortem a very large monolocular hydatid cyst was found blocking up the pelvis and nipping the ureters against the pelvic brim. Both ureters and the renal pelves were greatly distended and the kidneys much destroyed by backward pressure. No other hydatids were found. The brain was normal. Many such cases existed in the literature since 1787. Most of the cysts were situated under the peritoneum at the back or base of the bladder. Practically the cases might be divided into those cysts which were placed low down (basal), and caused retention by direct pressure upon the prostate, and into those which were situated higher up on the posterior wall (parietal), and evoked but few urinary symptoms until dangerous renal changes had ensued from backward pressure upon one or both ureters. The former variety were perhaps more successfully treated, for they attracted notice before great damage was done. Rectal aspiration was the usual treatment.

Dr. ROBERT MAGUIRE showed a specimen of Acute Verrucose and Ulcerative Aortitis, with the formation of an acute aneurysm. The patient was in St. Mary's Hospital for four months, and during life presented a systolic murmur at both the apex and base of the heart, and a soft diastolic murmur at the base. He had frequent rigors, with very irregular temperature. The splenic dulness was increased, but the spleen could not be felt. After death there was found ulcerative endocarditis of the auricular surface of the mitral valve, and on the ventricular surface slight recent ulcerations. The aortic valves were thickened, but showed no recent changes. At the junction of the ascending and transverse portions of the arch of the aorta there was a loculated dilatation of the vessel, with thin fibrous walls, and containing no fibrinous deposit. On the edges of the dilatation and of the loculi were large fibrinous vegetations, in which, on microscopic examination, there were found numerous streptococci. The spleen was enlarged, and contained a pale but not softened infarct. The case was looked upon as one of malignant endocarditis, in which the morbific matter had established itself in the aorta, and had caused verrucose and ulcerative aortitis with the formation of an acute aneurysm. He did not believe that the condition was caused by the organisms found in the vegetations, for so many different varieties were present.—Mr. SHATTOCK thought that, in his views as to causation, the author was at variance with the majority of observers. The disease usually originated in patches of chronic inflammation, and was due to a secondary infection of them.—Dr. SMITH asked if it were considered that the cardiac vegetations seen in chorea were due to micro-organisms. In deaths from many acute diseases he had seen small vegetations on the cardiac valves.—Dr. CROOKSHANK thought there was a great deal pointing to the fact that these micro-organisms were epiphytic. By what means did they gain access to the circulation.—Dr. HALE WHITE said that the ratio of ulcerative endocarditis to chronic lesion on the pulmonary side of the heart was very much greater than it was on the aortic side, and this fact seemed to him very significant in connexion with the presumed parasitic origin of the disease.—Dr. MAGUIRE, in reply, said that in the case related there was old mischief in both mitral and aortic valves. Though the starting point was usually in an old patch, many of the secondary lesions appeared to attack healthy lining membrane.

Mr. E. C. STABB showed two specimens of Dermal Cysts. The first came from a blacksmith aged thirty. He punctured his finger with a rusty nail, and the cyst which formed was tapped but refilled. It was then removed, together with the adherent skin, and was found to be composed entirely of squamous epithelium. The second occurred in a carman aged twenty. Nine months previously he had sustained a lacerated wound of the finger, which healed readily. Four months later a swelling formed, and this on removal presented microscopical appearances similar to the one above described. It was interesting to note that they both followed punctured wounds, which drove the epithelium into the deeper structures.

The following card specimens were shown:—

Mr. H. B. ROBINSON: (1) Webbed Fingers and Toes; (2) Cystic Disease of Testicle; (3) Columnar-celled Carcinoma of Small Intestine.

Mr. W. G. SPENCER: (1) Lympho-sarcoma in Dog surrounding Trachea and Bronchi; (2) Lympho-sarcoma in Dog surrounding Aorta; (3) Leucocythæmia in Cat.

Dr. G. GULLIVER: Acute Endocarditis of the Right Side, with Pulmonary Embolism.

EPIDEMIOLOGICAL SOCIETY.

The Cause of Enteric Fever in India.

A MEETING of this Society was held on Dec. 17th, 1890, Jos. Ewart, M.D., F.R.C.P., President, in the chair.

The Secretary read a communication from Brigade-Surgeon H. SKEY MUIR, M.D., on the Cause of Enteric Fever in India, in which he took exception to certain allegations made by Surgeon-Major J. Pringle, M.D. respecting the sanitary conditions of the hill station of Chakrata in a paper on the same subject read before the Society in May last. He denied that the place was "cold and bleak," that "it had nothing to recommend it except a magnificent water-supply 1000 feet above it," and that the authorities "had neglected to avail themselves of this," having recourse, instead, to tanks inevitably exposed to pollution. He gave a table showing the mean and absolute maxima and minima of temperature for five years, from which it appeared that the extreme range was between 23° in February and 88° in June, with a mean temperature of 60° in the summer and 40° in the winter half of each year, and a rainfall of from 50 to 80 inches annually. Very few men were, however, stationed there in the cold season. The "magnificent water-supply" from the Deobund had, he stated, been in use since 1870, though until 1887, when iron pipes were laid, it had been brought to the barracks in open

channels. The spring below the barracks, which Dr. Pringle had denounced, was only used occasionally in hot weather, and never during the monsoons. He denied that the outbreak of enteric fever in 1888 could have had any connexion with the water-supply, since the pipes had been laid in the previous year and the water contained only 1·8 grain of chlorine in the gallon and no ammonia or nitrates, and he argued that the disease occurring exclusively among new-comers within a fortnight of their arrival must have been contracted on the march through the plains. He gave a graphic description of the roadside wells from the railway station at Sanaranpore and of the river, from one or other of which the troops obtained their supplies on the march of seventy-seven miles, as well as of the camping grounds, entirely in agreement with Dr. Pringle's account and familiar to all Anglo-Indians, and, though not absolutely exonerating the water-supply at Kailana as he did that of Deobund, ascribed the annual occurrence of some ten to twenty cases in nearly every instance to infection contracted on the way to the station. — Dr. PRINGLE, in reply, entirely concurred with Dr. Muir in his condemnation of the filthy sources to which soldiers were compelled to have recourse on the march, which he had vainly urged the authorities to protect from contamination; but with regard to Chakrata itself, he said that the open conduits consisted of two planks sunk obliquely in the ground along a mule path, and were exposed to every kind of pollution. He was pleased to learn that pipes had now been substituted, but the outbreak to which he had referred as originating in the station was that of 1883 (the date 1888 in the abstract which appeared in the *British Medical Journal* being a printer's error). He knew that at that time the tank alluded to was in constant requisition, and he had urged in vain the utilisation of the rain water from the galvanised iron roofs. Dr. Muir's temperature tables fully justified his condemnation of the climate, so did the telling admission that the scarcity of wood for fuel necessitated the abandonment of the station in the cold season, the very time when such sanatoria were most useful. Its position, also, N. and S., was bad, exposing it to the direct influence of the hot winds from the plains, and the cold from the snow-capped mountains, whereas an E. and W. aspect afforded shelter from these extremes while giving the full benefit of the wind currents.—Sir JOSEPH FAYRER maintained that too much stress was laid on a supposed specific cause of enteric fever, believing that other influences akin to those concerned in the production of malarial fevers should be taken into account.—Sir W. MOORE held that the specific germ was a pure assumption, and that enteric fever was multiform, indefinite, and due to a variety of causes.—The PRESIDENT argued that the pathological identity of the disease, as shown, especially by post-mortem examination, throughout the world disproved a multiplicity of causes, that the bacillary theory was proved by an overwhelming mass of evidence, that the diversity in the non-essential phenomena was explained by individual peculiarities of age, constitution, &c., and that all alleged factors other than the specific cause were but predisposing influences rendering the individual more susceptible to infection.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Habitual Abortion.

AT an ordinary meeting held on Jan. 2nd, T. Gunton Alderton, Esq., President, in the chair, Dr. LEITH NAPIER read a paper on the Treatment of Habitual Abortion. The term "habitual abortion" being limited to a recurrence of abortion three or more times, Dr. Napier discussed in an exhaustive manner the various methods of treatment, classifying them under four headings: (1) Rest or exercise, insisting on the necessity of absolute rest for at least six days in the month; (2) local cure of uterine disease, chronic endometritis being regarded as the chief cause of abortion, in that retroflexion and other displacements, with atony of the mucous membrane, leucorrhœa, &c., were regarded as resulting from chronic uterine inflammations or congestions; (3) constitutional treatment; and (4) drug treatment. The value of local treatment was strongly urged, and in estimating the comparative utility of drugs the prolonged exhibition of mercury, even in cases of a non-specific nature, was extolled above all other therapy; while as a uterine sedative viburnum was preferred to any other drug by the author of the paper, in whose practice 77 per cent. of habitual aborters had borne living children after treatment by local methods and drugs.—A discussion ensued in which Dr. HANDFIELD JONES thought that too great stress had been laid by Dr. Napier on local treatment. He regarded heart disease as the primary cause of chronic uterine disease and retroflexion, and pointed out that the commonest epoch for abortion was that at which the gravid uterus was striving to rise out of the pelvis, cardiac disease generally causing abortion between the fourth and fifth month, failure of the left ventricle leading to uterine stasis, congestion, and petechial hæmorrhages.—Dr. NAPIER replied.

The General Secretary, in the absence of the author, read Dr. Macnaughton Jones's paper, entitled "A Plea for the Obstetric Art," and the meeting adjourned.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of this Society was held on Dec. 12th, Mr. H. E. Armstrong, President, in the chair.

The consideration of the sanitary legislation of the past session was resumed with the Infectious Diseases (Prevention) Act. Section 4 was severely criticised, Dr. WILLOUGHBY deprecating the repeated introduction of the limiting phrase "within the district," one effect of which was that a dealer prohibited from selling his milk in one town was at liberty to send it to another, which in most cases would be London.—Dr. NEWSHOLME objected to the production of proof of disease having been actually caused by the milk being required as a condition of putting in force the provisions of the clause, which was thus deprived of all value as a *preventive* measure—e.g., when scarlatina or other fever was as yet present at the dairy only.—Dr. SYKES expressed his belief that the sources whence a retail dealer obtained his milk afforded far more important information than could be derived from a list of his customers.—Mr. BLYTH deplored the delay necessarily following from the procedure enjoined by this clause, and Mr. ARMSTRONG, having never had any difficulty with the evidence furnished by the list of cases notified in inducing the dealer to state the sources of his milk and in stopping the supply at once, was convinced that this section would only serve to interpose impediments in the way of his action in the future. On Section 5 Mr. LOVETT stated that the delay apprehended by some was obviated in his district by his having received a general authority from his Board to act at any time without a previous order. No charge was made for disinfection, except when the occupier, to avoid publicity, desired it to be carried out after dark. The general feeling was that no disinfection should, or indeed could, be deemed effective unless performed by, or strictly in accordance with the instructions of, the sanitary authority. Section 8 was considered unsatisfactory, no instructions being given as to the mode of enforcing it, especially since, as Dr. Willoughby remarked, deaths were rarely registered within the specified period. Section 15 gave rise to a lively discussion as to the best manner of providing for an obvious want, the extent and nature of the accommodation required in different communities, and the necessity for disinfecting the clothing of the individuals temporarily unhoused.—Dr. NEWSHOLME said that at Brighton they hired empty houses for a few days, the Corporation providing furniture, bedding, &c.; and Dr. YARROW that in St. Luke's a house had been taken and fitted up as a permanent refuge, one of the *employés* of the vestry being appointed caretaker. Several cases were mentioned in illustration of the urgent need for such provision, among them one of a woman with her child, who had conveyed the infection of scarlatina to the family of a friend at whose house they had passed the night while their own was being disinfected. The Public Health (Amendment) Act elicited unqualified approval except as to its permissive character, and a resolution was carried unanimously that Mr. Ritchie be requested to obtain the compulsory extension of Part III. to London, or to incorporate its provisions into his Metropolis Management Bill, referred to in the speech from the throne.

CLINICAL SOCIETY OF MANCHESTER.

The Treatment of Tuberculosis by Koch's Method.

AN ordinary meeting was held on Dec. 23rd, 1890, Dr. Braddon, President, in the chair.

Dr. JUDSON S. BURY opened the discussion, and gave a detailed account of the method from personal observation during a recent visit to Berlin. Dr. Bury strongly advised the use of very small quantities of liquid in commencing treatment.

Dr. GUMPERT remarked upon the extraordinary power of selection of tuberculous material displayed by the liquid, and pointed out the immense benefit which would be obtained by the early use of the remedy in doubtful cases, before the disease had progressed too far for treatment to eradicate it. From observation made in Berlin Dr. Gumpert urged the importance of using small injections to commence with, increasing gradually until the exact quantity required to produce the desired local change had been determined. A dose of one milligramme or even less was sufficient at first. With half a milligramme distinct reaction had been obtained. Dr. Gumpert afterwards showed a patient of Mr. Southam's in whom he had injected three milligrammes each time on December 8th, 12th, and 18th. The patient, a lad of sixteen years of age, had numerous (over thirty) patches of lupus in the face, on the neck, the back, and the legs. He had had a tuberculous affection of the left knee in early childhood, which had produced total stiffness of the joint thirteen years ago. The reaction after this comparatively small dose had been very severe headache, pain in the chest, and very severe pain in the strumous knee; rigor about nine hours after the first injection, but not after the others; high temperature—104·4°, 104·2°, and 104·6° respectively; repeated vomiting fourteen, fifteen, sixteen, and seventeen hours after the first injection, but not after the others. The stiff knee became slightly movable in the evening of Dec. 9th, and could be bent to an angle of about 120° on the following day. It became painful and stiff again some hours after the second and third injections, and more movable after the disappearance of the reaction, and can now be bent without the slightest pain to a right angle. The lupoid patches were all markedly improved.

Dr. COLIN CAMPBELL (Saddleworth), after thanking the Society for their kind invitation to be present, said he regretted that his observations of the results of Koch's treatment did not enable him to agree with the very favourable opinions expressed by Dr. Bury and Dr. Gumpert. They spoke of "cures" as if they were undoubted facts. He had grave doubts about these cures, and a consideration of the theory advanced to explain the working of the new remedy did not diminish these doubts. He had seen a great number of cases in Berlin, and carefully noted a few in each class. The cases of glandular enlargement were certainly not benefited. Scrofulous joints appeared to be improved, but as much improvement often took place from rest alone; and as regards lupus, he saw only one case in which a cure was claimed, and he thought Dr. Sutcliffe could give them later news about that one case. The other cures he noticed were also observed sixteen days later by Dr. Sutcliffe who still reported "no improvement." Where then were the "cures"? He had several patients anxious to try the treatment; but on the evidence before him, and his own observations, he was unable conscientiously to recommend it otherwise than as an experiment.

Dr. SUTCLIFFE (Stalybridge), from personal observation of cases, thought that the time had not yet arrived for formulating any definite rules as to the best method of using the liquid or the results of its action. Probably the best way to treat phthisis would be by small doses injected at intervals of a fortnight spread over a long period of time, and conjoined with all hygienic, tonic, and climatic treatment available. He showed an asbestos syringe largely used in Berlin in preference to the one used by Dr. Koch.

Dr. BRIERLEY deprecated following a "method" and using a preparation the composition of which was not known to the profession, and was of opinion that English practitioners would be chary about putting this sensational treatment of tuberculosis into practice. Since the method was purely experimental at present, he thought the treatment should be carried out only in hospitals, where the patients could be constantly under the immediate care of skilled workers.

Dr. SIMPSON, though disliking the secrecy, at present perhaps unavoidable, of Koch's preparation, considered that we should not be justified in passing it by. Its use required great caution, and its curative value was not as yet firmly established. In many advanced cases, or where pulmonary tubercle was extensively distributed, it was contraindicated, and could only be used with the utmost possible caution in any threatening of meningeal tubercle. Then, too, there was some evidence that it might set up activity in some cases where tubercle might have remained. This raises the question, What becomes of the bacilli? They do not share, it seems, in the death of the tuberculous tissue. Are they in some cases, by the absorption of this, simply set free with their active properties unimpaired?

Dr. Braddon and others also addressed the meeting.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING was held on Dec. 18th, the President, Mr. W. Dale James, in the chair.

Typhoid Fever.—Dr. DYSON showed the ileum from a case of typhoid fever. The patient was a girl aged seventeen. She died on the forty-seventh day of the disease of exhaustion and hypostatic pneumonia. She had been ill fourteen days before admission to the infirmary, and suffered throughout from vomiting and gastric irritability. In the early part of the case the vomiting was largely biliary; hence great difficulty was experienced in feeding the patient and in the administration of antipyretics. The ulceration of the bowel was extensive; some of the ulcers were cicatrising, others appeared recent, and several were deep, the floor of the ulcer being formed by the serous coat of the bowel.—Mr. T. Robinson, Dr. Burgess, Mr. A. Jackson, Mr. Baldwin, Dr. Martin, Mr. Garrard, Dr. Mathews, and Mr. B. Walker joined in the discussion.

Miners' Nystagmus.—Mr. SNELL introduced a patient suffering from miners' nystagmus. He said that an impression was current, particularly among the miners themselves, that the use of safety lamps was the cause of this affection. A case like the one introduced was in direct opposition to such an opinion. The patient had worked with safety lamps for fourteen years, and experienced no discomfort with his eyes. For the last three years and a half he had, however, been working entirely with naked lights—candles,—and it was during the last year or so only that his symptoms had developed and necessitated his leaving his work. It was a very well marked case of nystagmus. Mr. Snell remarked that he had seen several other cases occurring in men using naked lights. Fewer men, however, worked with naked lights than with the safety lamp; hence the cases of nystagmus met with were most frequently in those employing the safety lamps. Mr. Snell said, after an experience of several hundred cases, that the affection was occasioned by the position a proportion of coal getters were compelled to assume at their work. He had expressed these views in a paper before the Ophthalmological Society (Transactions, 1884) and elsewhere. The position (head and eyes obliquely upwards) was assumed chiefly by men engaged in "holing." The patient introduced was a "holer," both when using safety lamps and later when employing candles.—Remarks were made by Mr. Goodall and Mr. Boynton Lee.

Mr. B. WALKER read the notes of a Cerebral Case. The patient, a woman aged sixty-three, had a fit of apoplexy, resulting in right hemiplegia, six years ago. The leg, as usual, recovered more rapidly and completely than the arm, the latter shaking so when she attempted to lift anything that it became practically useless. On Nov. 4th last she had a second apoplectic seizure, remaining unconscious for forty-eight hours. After sinapisms had been applied to the lower extremities and a blister to the back of the neck, consciousness gradually returned, and the first thing the patient did was to lift a cup of water to her lips with the hand which had been so long disabled, and the power of using the arm had continued. Mr. B. Walker spoke in defence of the old-fashioned practice of counter-irritation, and even bleeding in some cases of cerebral apoplexy.—Mr. James, Dr. Martin, Dr. Dyson, Mr. Jackson, Mr. W. F. Favell, Dr. Mathews, Mr. E. Barber, and Dr. Sidney Roberts spoke.

Reviews and Notices of Books.

Transactions of the Medical and Physical Society of Bombay. No. 12, New Series. Published at the Education Society's Press, Byculla. 1890.

IN this volume a most interesting record is given of work brought forward at the meeting of the Society by its members. Amongst the most interesting of these is a paper by Dr. H. Vandyke Carter, principal and professor of medicine in the Grant Medical College, entitled "A Brief Description of Micro-organisms present in the Blood of Ague Patients." Dr. Carter, whose elaborate researches on the spirillum of relapsing fever marked him out as one who would act the part of a strictly impartial observer, arrives independently at the conclusion that it is impossible to cast doubt on the accuracy of Laveran's observations on the so-called hæmatozoa of ague. He confirms Osler's additional evidence, and gives drawings and descriptions of the organisms which should prove of considerable value, although he appears to have missed the peculiar radiate arrangement that has more recently been observed in the breaking up corpuscles. After careful examination of Lewis' hæmatozoon of the Indian rat and Steel's organism found in "Surra" disease, he recognises between them and the ague organisms of man an analogy, as far, at any rate, as the monad character of the organism is concerned. One curious feature observed by Dr. Carter, and one well worthy of careful consideration in connexion with the relation of the organism to disease, is that there appears to be no definite relationship between certain symptoms of malaria and the actual presence of the blood organism. He says, for instance, "I find that the more persistent phenomenon is the presence of the blood organism, whilst the febrile state may be only occasional; indeed, fever seemed unfavourable to abundance of the monad; and I have ascertained that it may be checked (by quinine) without at once entailing the disappearance of the parasite." Another interesting observation he has made, one that appears to have a considerable bearing on the phagocyte theory, and which may be brought up as evidence against the strict accuracy of Metchnikoff's theory, is that the organism during two stages of its existence—the pigmented spheroids and the flagellate forms—might be devoured by "coarse-grained leucocytes wandering in the liquor sanguinis; these marauding phagocytes always, however, sparing the crescents, whose persistence might, perhaps, serve to account for subsequent febrile relapses." Although so much has been written on the subject of phagocytes, and it has been so frequently discussed at recent congresses it does not appear that Metchnikoff's theory is yet fully understood by those who have used it to explain certain phenomena in disease, and certainly the arguments put forward by some more recent writers do not strengthen Metchnikoff's main contention that phagocytes are able to remove living organisms. Dr. Carter's observations are certainly not in accordance with the views held by the strict disciples of Metchnikoff. Although he mentions the phagocyte theory, and speaks of it as explaining the above features noted by him, those who read what Dr. Carter has written will be inclined to agree that, however highly the function of scavenging is developed by the phagocytes, their power of devouring living foreign protoplasm is surrounded by very distinct limitations. Dr. Carter considers that the peculiar conditions of melanæmia and urobilinuria, when the result of ague, are due, not so much to changes in the liver, but to changes in the spleen, which, in certain cases observed, was far more seriously implicated than the liver itself, and he says: "Doubtless, hepatic derangement ensues on the malarial infection, yet secondarily, I should say to the splenic; and I would connect, in this instance, at least (mentioning a case), the state of the urine with that of the blood." This record of the occurrence of Laveran's ague organisms is interesting as being the first that has come from India, and as opening up a new field of scientific investigation for British workers, which has hitherto been left almost entirely to the French, the Italians, and the Germans, and we hope that under Dr. Carter's careful direction his British assistants and Indian pupils may corroborate and extend the series of observations that he has commenced. In the meantime Dr. Carter promises further contributions on the pathology of ague and on the therapeutics of quinine in a paper to be published in the Scientific Memoirs (Official), vol. iii., Calcutta.

Another paper by Balchanora Krishna, L.M. & S., which will be read with interest at the present juncture, deals with Leprosy in Bombay in its Medical and State Aspects. It appears to have been brought forward specially to answer some of the questions raised by the Draft Leper Bill. Mr. Krishna contends, in opposition to the assumption of the Bill, that every case of leprosy is not contagious, the non-tuberculated or anæsthetic form which is most prevalent in India being seldom contagious, except, perhaps, during the ulcerating stages. He considers that, although leprosy is prevalent throughout India, it is impossible to obtain satisfactory statistics to show whether the disease is increasing or on the decline. That it is endemic he does not doubt, and also that it may be transmitted hereditarily. He does not agree with Mr. Hutchinson in his theory of a "peculiar specific poison" in fish, nor does he allow that the disease is communicable by aerial infection. He insists on the extreme difficulty of diagnosis during the early stages of the disease, and shows that even qualified medical men are apt to make mistakes unless they have had a wide experience in the treatment of leprosy; the powers suggested to be given to medical men in general under the Bill are, he thinks, too extensive. Whilst holding that certain clauses in the Bill are really the result of a scare, that they are ill considered and ill timed, he maintains that if these be deleted it would "be a desirable measure, in so far that when it becomes an Act it will serve pre-eminently to calm the public mind, which has been excited to the highest pitch, because it will be the means of removing vagrant lepers from the public gaze; but whether it will serve to stamp out the disease I am not sure." As to the question of asylums, he considers that they are unnecessary, except for those poor and diseased wretches covered with innumerable and loathsome ulcers and otherwise disabled, whose sufferings might indeed be greatly alleviated by care, protection, and food; but otherwise an equally strong cause might, he thinks, be made out for the construction of asylums for phthisical and syphilitic patients.

Mr. Krishna's paper is well timed, and will be extremely valuable if it will only enable people to think of "leprosy" without being panic-stricken. It is only one of several diseases the very names of which strike terror in the hearts of those who hear them. In this country, at any rate, it must be admitted, such terror lives on the reputation of the disease and not on any actual danger that there is of contagion or infection. In India, and in other countries where the disease is still endemic, it is now recognised that we must look to well-considered sanitary measures for any improvement in the nature and course of the disease, and as this fact is accepted, and as hygienic precautions are taken to prevent the spread of the disease, leprosy, like cholera, will become more and more restricted in its sphere of operations.

Influenza or Epidemic Catarrhal Fever. An Historical Survey of Past Epidemics in Great Britain. Being a New and Revised Edition of "Annals of Influenza," by Theophilus Thompson, M.D., F.R.C.P., F.R.S. By E. SYMES THOMPSON, M.D., F.R.C.P. 8vo, pp. 490. London: Percival and Co. 1890.

THE recent epidemic of influenza has shown the great value of the "Annals" compiled for the Sydenham Society by the late Dr. Theophilus Thompson. In looking through those records from 1510 to 1837 we see the likeness of the various outbreaks of the last four hundred years. Of these the five that have occurred during the present century, and the ten in the last, are illustrated by our greatest medical writers, while those of 1658 and of 1675 are treated of by Willis and by Sydenham.

The republication of so important a work, beyond the limits of the Society's volume, is well deserved. The care and industry of its compilation are everywhere conspicuous: the views of each author are clearly set forth within quotation marks, and the editor's observations, distinguished in the original by brackets, but now unmarked, have a value of their own; the revision by the author's son, Dr. Symes Thompson, has been well and ably carried out; the present volume, in shape, size, and typography, is very like the original; it is handy and well printed, and the pages very closely correspond. The omission of some meteorological details has been judiciously managed, so that no important part of the old records is wanting. The new matter, including Dr. Peacock's account of the 1847 epidemic, is a worthy continuation of the "Annals"; that on the recent epidemic by the present editor is of great interest, but, though extending to seventy pages, necessarily falls short of its object. This may be noticed further on. The assumption of the two parts of author and of editor are difficult to sustain, and must be regarded separately in any review. The editorial part is on the whole well done, but some details of it have to be questioned. Would it not have been well for the new editor to have used brackets when additions of his own are inserted in the work? And some note of alteration should appear where alterations are made in the text, and such should be very restricted. In the preface, why retain the paragraph on Sir George Baker and omit that referring to the great writers from Huxham to Heberden? The last part of the original preface rightly gives place to notices of the 1847 and 1889 epidemics, but why not in their order of sequence? The introduction has more than a page of new matter, replacing much of the original that need not have been omitted, with nothing to indicate the extent or limit of the change. If in the concluding part it is allowable to substitute "micro-organism" for "some virus" introduced into the system, we might surely have had "typhus," near the beginning, replaced by "typhoid or enteric fever," the substitution in both cases preferably being made by added words in brackets. Other modifications of the vigorous original are less defensible, such as "coincide" for "combine" in the very true observation that influenza modifies any pre-existing disease with which it may combine; this would not be true of any coincident disease, and if coincident how can either be pre-existent? Two lines are added to the same paragraph not closely pertinent, and without any remark it is impossible to distinguish the son's from the father's work. As to traits of authorship, a family tendency is observable. The plea for including vague possibilities, well urged in the original, is too much adopted in the sequel, where ozone, cosmic dust, and Chinese inundations have more than their full share of notice. Siberia is referred to as a source of influenza, and cholera (p. 415) as a concomitant. The coexistence of disease among animals is not very critically treated. The summary of this last epidemic is very imperfect, not only as to extension but as to symptoms. Coryza, in some degree nearly always present, is given as "generally absent"; rel[illegible]es are omitted, though at p. 449 "many," and at p. 453 '6 per cent.," are reported; rashes, mostly exceptional, and very seldom with any desquamation, are said to be of "frequent occurrence"; while any lessened prevalence of the epidemic in London coincident with "or after strong gales" is not evident in the preceding account. Some statement as to the large amount of original matter added by the new editor should in our opinion have been inserted in the title page, which otherwise might have been retained in its original form, and not have been so altered as to displace "Annals" from the heading or leading feature of the title.

The Medical Student's Manual of Chemistry. By R. A. WITTHAUS, A.M., M.D., Professor of Chemistry and Physics in the University of New York, Professor of Chemistry and Toxicology in the University of Vermont, &c. Third Edition. New York: William Wood & Co.

THE new edition of this work has been carefully revised and, to a great extent, rewritten. It is an excellent text-book for diligent medical students—those who wish to acquire a real sound knowledge of chemistry,—as well as for medical practitioners. It is lucid in style, contains a great amount of matter in a small space, and is disfigured by few inaccuracies. Chemical and physical theories as well as facts receive fair recognition, and although the applications of chemistry to physiology, medicine, and toxicology are systematically kept in the foreground, the science of chemistry is presented as a whole without regard to mere utility or the exigencies of an examination. The book is divided into three parts, the first devoted to general Chemistry and Chemical Physics, the second to Special Chemistry, and the third to Chemical Technics. The applications of physics to chemistry are of such great and increasing value that they require more space than the thirty pages here allotted to them, and it would have been well if they had been discussed at greater length, even at the cost of subsequent curtailment. The accounts of spectroscopy, polarimetry, and galvanic electricity are well written, and give good general ideas in regard to those powerful aids to research; but they are too short to afford sufficient guidance for practical work. Raoult's law of freezing points is described, though somewhat imperfectly; but we find no allusion to thermal or refractive equivalents or to the molecular volume of liquids. The omission of thermal chemistry is peculiarly unfortunate, as it is more than ever essentia to physiology.

In the second or descriptive part of the book more than half the space is devoted to the chemistry of carbon compounds—that is, to what is commonly called organic chemistry. Throughout this part the matter is well selected and well arranged, and the physician not less than the student will find in it much that will be of practical use to him. In addition to the ordinary toxicological and physiological methods, many suggestions, evidently founded on personal experience, are scattered through the pages. As examples we may quote the remarks on the physiological action of copper compounds (p. 214), on the ptomaines (p. 455), and on the precautions to be taken by the physician in cases of suspected poisoning (p. 130). The account of "laboratory technics," to use the author's phrase, in Part 3 may be described as neither very bad nor remarkably good. Here and elsewhere unnecessary confusion is introduced by the use of diagrams in which the illustrative letters do not correspond to the descriptions in the text. The diagrams themselves are not of a high order of merit.

For the peculiar and irritating nomenclature adopted in this edition Dr. Witthaus cannot be held responsible. A committee of the chemical section of the American Association for the Advancement of Science has decided that in

future chlorine shall be written and pronounced chlorin, a chloride a chlorid, and so on. Alterations of nomenclature always involve inconvenience, and are only justified when they present some substantial advantage. We do not think that anything is gained by calling an old friend "iodid of potassium," and object altogether to the change. We neither can nor will describe the chief alkaloid of cinchona as quinin with the second vowel short; in short, there is really no possible reason for doing so.

Annual Report on Meteorological Observations in the Straits Settlements for the Year 1889. By MAX. F. SIMON, Acting Principal Civil Medical Officer, Straits Settlements.

THIS bulky Blue-book gives a very full and exhaustive record of the meteorological features of the principal places in the Straits Settlements—viz., Singapore, Malacca, Penang, and Province Wellesley. The results are interesting, as the localities mentioned all lie very near the Equator. So we may take the figures given as constituting one type of the equatorial climate. The several localities all lie very near the sea level—thus the site of the observations was ten feet above sea level at Singapore, twenty feet at Penang, twelve feet at Malacca, and forty-three feet at Province Wellesley. The first table gives the atmospheric pressure, which at Singapore showed a maximum of 30·075 inches, a minimum of 29·740, and a mean annual range of 29·891. This shows that the pressure was remarkably equable. At Malacca and Province Wellesley the equability was even greater, while at Penang it was somewhat less, than at Singapore. The next table gives the temperature. The highest recorded at Singapore was 93·8°, the lowest 68·7°, the mean was 81·4°, and the average range of the thermometer for the year was 13·4°. These are shade temperatures. The figures for Malacca are almost identical with those for Singapore, while Penang showed a maximum of 95·5°, a minimum of 70·0°, a mean of 82·2°, and a range of 13·6°. Province Wellesley showed somewhat less equability, as might be expected from the slightly greater elevation. The maximum there was 96·0°, the minimum 69·0°, the mean 82·3°, and the range 16·0°. Further evidence of the equable warmth of the climate is afforded by the figures showing the temperature of nocturnal radiation on grass. These show that the lowest point touched at any season was 65·4° on Jan. 4th at Singapore, 69·0° at Malacca on April 22nd, 64·0° on March 1st at Penang, and 67·5° on Feb. 28th at Province Wellesley.

The relative humidity table brings out some figures for which we were hardly prepared. The maxima are what might have been expected in a warm marine locality near the Equator. These are for Singapore 98, and 100 for the remaining three localities. The minima, however, are somewhat surprising. These were for Singapore 56, Malacca 76, Penang 48, Province Wellesley 47. We were by no means prepared to find them so low. As the means for the year are somewhat high—viz., 81 at Singapore, 89 at Malacca, 76 at Penang, and 86 at Province Wellesley—probably the minima refer to some brief period during the prevalence of dry continental winds.

Very full information is given regarding the prevailing winds. We learn that north-east winds predominated during the months of January, February, and March. In April the directions were principally south-south-west, north-west, and south-west, the last continuing steadily till July. From August to November, variable in south-east, south-south-west, west-south-west, and west prevailed. In December, north-east winds set in, with heavy gusts, interrupted by gusts from the north-west towards the close of the day. The mean velocity of the winds in 1889 was 143 miles, and the greatest velocity was 235 on May 28th. In general, the winds in the localities under consideration are from the north-east during the winter, with clear, dry weather, and from the south-west during the summer, with rainy weather. The rainfall is everywhere heavy, but varies much according to season. Thus at Singapore 84·13 inches of rain fell upon 174 days. The maximum monthly fall was in November—viz., 18·24 inches; and the minimum monthly fall in March—viz., 1·20 inches. The greatest fall in twenty-four hours was 5·90 inches, a large amount. At Malacca the mean fall was 87·67 inches, but at one of the localities of observation in this district there was a fall of 144·23 inches. In this same spot the fall for October was no less than 42·50 inches. In Penang the mean fall of several localities was 110·02 inches. The greatest monthly fall was in October—viz., 22·04 inches, and the least in February—viz., 0·52 inch. In Province Wellesley the mean fall of several localities was 94·01 inches, the maximum monthly fall was in November—viz., 18·75 inches, and the minimum in February—viz., 1·42 inches.

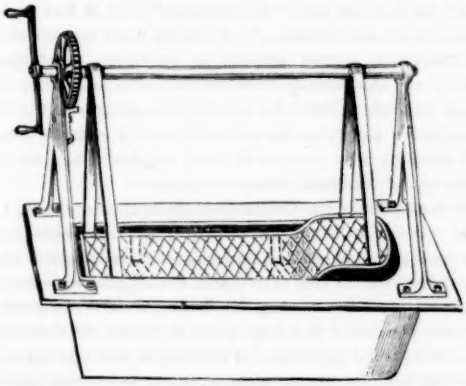
Taking the climate of the Straits Settlements as a whole it will be seen that it is hot and equable, that the rainfall is large and at some seasons excessive, and that the prevailing winds follow the general laws which obtain in the regions of the monsoons. The localities under consideration are not of any importance from the point of view of the therapeutic bearings of climatology, as invalids are very unlikely to resort to them; but Singapore and some of the other places mentioned are so important from a commercial, and to some extent also from a military, point of view, that the figures educed will be found interesting. Such climates as those here described are necessarily trying to the Anglo-Saxon, and are probably incompatible with the thorough vigour and fertility of our race. They seem to exercise their inimical influence most in the early years of life. In the case of adults there is always room for speculation how far the injury to health which a residence in the tropics frequently entails is due to some essential feature of the climate, and how far to the persistence under changed conditions in the dietary and general habits of life suitable to Great Britain. There can be no doubt that many of the diseases which prevail among our countrymen in India and elsewhere in the tropics are of dietetic origin, and that an approximation to the national habits of the native population would rob many of these diseases of much of their virulence. On the other hand, we can never shake off our racial peculiarities, and the attempt to make the Anglo-Saxon eat the same food and lead the same life as the Hindoo or the Malay would certainly end in disaster. The most we can do is to effect a reasonable compromise between our racial tendencies and the necessities of climate.

New Inventions.

BATH LIFT FOR THE PARALYSED AND HELPLESS AND FOR PROLONGED IMMERSION.

THIS bath lift, to which I would call the attention of the profession, was designed with a double object—(1) to prevent those accidents which from time to time occur during the bathing of the paralysed and otherwise helpless, and make the bathing of the most helpless patient by a single nurse at once possible and safe; and (2) with a view to the better carrying out of prolonged immersion—a mode of treatment frequently resorted to at present in various diseased conditions. The accompanying diagram gives a very good idea of the apparatus. It consists of a light, rigid frame supporting a strong net, and raised at the end to form a pillow. This net can be elevated to the level

of the top of the bath and lowered at will by means of the handles attached to the revolving bar. A rack-and-pinion arrangement makes it impossible for the net to "go down with a run," and the bent crossbars (shown through the net in the engraving) keep the net three inches from the bottom of the bath tub when at its lowest. In use, when the patient is brought alongside the bath, the net is raised, the patient comfortably placed thereon, and gently lowered into the water prepared for him beneath. Bathing over, the net is raised again to the level of the top of the bath, the patient rubbed dry, and prepared for bed. Nurses and others who have single-handed attempted to lift a helpless person from the bottom of a bath will be able to appreciate the usefulness of this contrivance. The advantages of the lift in cases of pro-



longed immersion are many, not the least of which is that the patient is supported in mid-water, his weight being equally distributed, and no portion of his body being allowed to come in contact with the bottom of the tub. Should the patient be delirious or maniacal, the limbs can easily be secured to the net, and all dangerous struggling is obviated. There is sufficient space between the edge of the net and the side of the bath to prevent injury to the fingers should the bather grasp the rods. The apparatus can be made to fit any size or shape of bath, and can be fixed to an ordinary bath in a few minutes. It is also to be noticed that the net and revolving bar can be removed in a moment, so that in a private house the bath may not be monoplised by the invalid. The machine should, I think, prove of great value both in the private house and in the public institution. It is manufactured by Mr. J. Ward, 246, Tottenham-court-road, London, W.

S. A. K. STRAHAN, M.D.

COTTON-WOOL HOLDER FOR THE APPLICATION OF LACTIC ACID TO THE LARYNX.

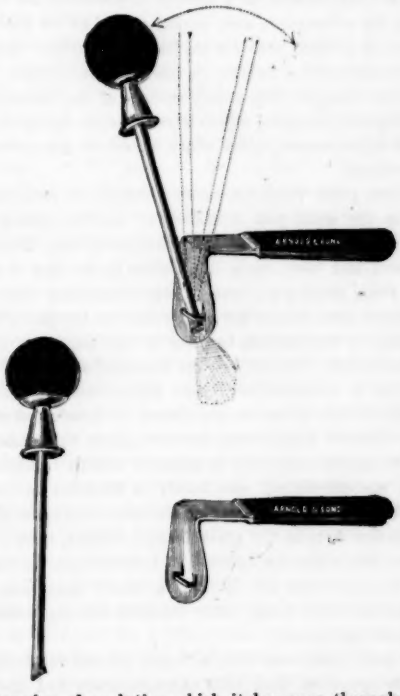
THIS holder is very similar to the ordinary laryngeal probe. The end (*a*) is screw shaped, and made of silver. The stem is rather thick, so that it does not easily bend. The handle (*c*) is made of wood, and can be screwed off, so that we can thoroughly disinfect the stem in boiling water or some strong antiseptic. The whole of the holder can also be made of aluminium. The advantages of this holder

are—(1) that the cotton-wool can be screwed on and off very easily; (2) that we can regulate the thickness and length of the cotton-wool to suit each individual case (we can thus carefully localise the application of the acid, and also get at those diseased parts which lie in the vertical plane); (3) that we can easily disinfect the holder; and (4) that it is very simple and cheap. The ordinary camel's-hair brush is much too large and the stem too flexible, so that the application of the acid cannot be properly localised or energetically enough carried out. The cotton-wool holder of Heryng has the great disadvantage that part of the cotton-wool is covered by the metal sheath, so that we cannot easily get at those parts which lie in the vertical plane. It is also often very difficult to remove the cotton-wool from the loop after use. The holder is made by Messrs. Down Brothers, St. Thomas's-street, London.

ADOLF BRONNER, M.D.,
Bradford. Surgeon to the Bradford Eye and Ear Hospital.

AN IMPROVED INSUFFLATOR WITH ADJUSTABLE TONGUE DEPRESSOR.

THE original insufflator of Dr. Osborne has two great disadvantages: one, that the powder has to be blown into the patient's mouth by the operator—an unpleasant and in certain cases (e.g., diphtheria) a risky thing to do. The improved Osborne insufflator, introduced to the profession by Mr. Alexander Duke, does away with this danger and unpleasantness by replacing the use of the operator's mouth by an indiarubber ball. But in both of these the left hand of the operator, whilst holding such instrument, gets into the line of vision; so, at my suggestion, Messrs. Arnold and Sons, of West Smithfield, have made for me the insufflator which is depicted in the engraving, and which,



by a species of evolution which it has gone through, is, I think, as perfect as such an instrument can possibly be. The tongue-depressing part is separate from the insufflator proper, which runs through a metal loop or bridge on the upper surface of the depressor, and, there being plenty of "play," by the slightest movement of the hand the powder can be ejected to all points of the fauces. Moreover, the handle of the depressor, which is of roughened ebony, being made at right angles, not only is more handy to hold, but—and this is its especial advantage—the left hand is well out of the line of vision. Again, the tongue-depressor can be used as a separate instrument for ordinary inspection of the fauces.

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THE LANCET.

LONDON: SATURDAY, JANUARY 10, 1891.

THE third report of the Royal Commission on Vaccination is in one sense the most important that has been issued as yet, for it contains the evidence of three witnesses, who have been selected by the party opposed to vaccination to set out their case from different points of view. The subject necessarily involves a number of questions which can only be satisfactorily dealt with by men of scientific training; and when the veteran scientist, Dr. ALFRED RUSSEL WALLACE, D.C.L., F.R.S., was openly enlisted into the ranks of the anti-vaccinationists, an immense gain to that cause from the scientific point of view was held to have been achieved. Naturally Dr. WALLACE was chosen as a leading exponent of the views held by his colleagues; and, having regard to his position, it must be evident that his evidence was looked upon as likely to influence a number of less scientific people. Dr. WALLACE occupied four entire sittings of the Commission in setting out his views, which were enforced by an abundance of diagrams and tables which have been reproduced in an appendix.

The first point which the witness brought forward had to do with the small-pox mortality of London during the period 1780–1883. During this century it was admitted that there had been much diminution in the rate of mortality from small-pox; but it was contended that this diminution could not in the earlier half of the period have been due to vaccination, because it was too great to be thus explained. This subject was discussed at great length, but when it is remembered that there were no accurate statistics either as to the population of London or as to deaths—burials alone being recorded, and the causes of death being often set down by ignorant women "searchers,"—such ancient history can hardly be regarded as having much bearing on the results of the administration of the Vaccination Acts in the present day. Indeed, were it not for that which later on followed in his evidence, we should have thought that Dr. WALLACE would have been the last witness who would have founded an argument on such imperfect data.

The next point was that, a "very general vaccination" being in operation from 1822 onwards, there had been no diminution of small-pox down to 1883; and apparently this view was largely based on the occurrence during this period of the small-pox epidemic of 1838 and that of 1871. Dr. WALLACE altogether ignores the fact that the neglect of "general vaccination" was such that as late as 1871 it was found necessary to pass an Act setting in operation a new machinery for the enforcement of the law in this respect. He declined, when asked, to consider the influence of the increased amount of registration of death and of accuracy in recording its causes which set in in 1838, when the Registration Act first came into operation; and he certainly failed to take sufficient account of the fact that his own diagram shows an immense reduction in the amount of London small-pox in the second as compared with the first half of the century to which his remarks relate.

Next followed evidence as to Sweden, Austria, and Prussia; and when Dr. WALLACE was asked why he had failed to continue his table of small-pox statistics for the latter country beyond 1873, and this in face of the influence of the well-known compulsory law of 1874, he, professing to speak as an exponent of the subject of vaccination, made the astounding statement that though he "had heard of that law" he had not seen "any evidence" that it had made "any important difference." Naturally Lord HERSCHELL, as Chairman, seemed anxious to get on to the "next point," and this point deserves the serious consideration of those who are induced to accept statements relating to vaccination merely on the ground that they emanate from an authority who happens to have acquired eminence in some entirely different branch of science.

In laying before the Commission the evidence relating to that which Dr. WALLACE described as his "most important" diagram—a diagram which, we may explain, has appended to it no less than fifteen closely-printed foolscap pages of statistics relating to small-pox in France—the witness was careful in a long proem to lecture the Commission on the vital importance of arriving at true conclusions, and the need, in seeking after causes, to have experiments that shall be strictly comparative. TYNDALL and his researches were appealed to in this connexion, the experiments of DARWIN upon the fertility of seeds were recalled, and it was urged that accuracy of the same sort, and an absolute test and determination of a kindred character, were necessary to true knowledge on the point under consideration. "Fortunately," said Dr. WALLACE, "we have an approximation to that condition of things in France"; and then followed an exposition of an enormous mass of detailed statistics prepared by his own hand. The Commission appears to have been much impressed with the voluminous evidence brought before them, and which at first sight almost seemed to imply that, under some peculiar idiosyncrasies attaching to the French race, vaccination bore no such relation to small-pox death as it is known to bear in this country. But at the next sitting the Commission had had time to examine both the statistics and the sources whence they were derived, and the result was to show that Dr. WALLACE'S theory was based upon a series of blunders that one would hardly have expected from a school-boy. The statistics as to one French department were recorded twice over. The detailed figures in this case of repetition were with one or two obvious errors alike, and yet a difference of some 3000 was made in adding up the data. Oddly enough, Dr. WALLACE was not even aware that he had dealt with the same department twice over, although the two columns stand side by side in his tables. It was next pointed out to the witness that for the department of Sarthe he had entered that there were no small-pox deaths during a long series of years, whereas in the single town of Le Mans in that department no less than 1179 such deaths had been recorded in two out of the years in question. As to this, Dr. WALLACE had no answer; but it subsequently turned out that wherever,

owing to the difficulties attendant on the Franco-German War, no official returns could be obtained, and a blank was left, Dr. WALLACE had taken upon himself to make an entry to the effect that no deaths had occurred, and this for the very years when small-pox was most fatally prevalent. Again and again was the witness taxed with inaccuracies of this and an allied sort, and the feelings which were elicited by the fact of his having submitted such evidence to the Commission may be judged of by Lord HERSCHELL'S retort on one occasion, to the effect that "one does not accept statistics blindfold"; by Sir WILLIAM SAVORY'S question, Whether the witness would like his table to go forth as worthy of his "scientific reputation," and by a string of questions put by Sir GUYER HUNTER, ending in a demand whether Dr. WALLACE regarded the data which he had brought before the Commission as "having the accuracy of a DARWIN or a TYNDALL." Happily, after some hours of discussion, Dr. WALLACE was constrained to admit that "the whole thing is valueless," and he even refused to respond to Dr. COLLINS' suggestion that some remnant of good might yet have been found in his tables.

In the main Dr. WALLACE'S evidence was statistical; but when modern statistics were submitted to him, showing the enormous diminution of small-pox in children—that is to say, in the years immediately following vaccination,—he declined to go into the matter on the ground that it involved a question of "medical statistics"; and when it was urged that the fact was one of prime importance, his answer was: "I have nothing to do with either disputing or affirming it." On another occasion, when urged to explain further what he meant by declaring that the comparison between the vaccinated and unvaccinated mortality "in official and medical statistics must be rejected," he stated that on "great points" like that "other gentlemen" would be called. As yet, however, these other gentlemen have not turned up to give the needed explanation.

Although we have at some length dealt with Dr. WALLACE'S evidence, we would urge all who are interested in the question to read it for themselves. Its significance is immense. Modern statistics emanating from our own country, and which can be at once verified, were avoided, whilst returns for a past century and for distant places, the verification of which is well-nigh impossible, were set out instead, the story being preceded by a glowing account as to their scientific accuracy and importance, which the result showed to be altogether unwarranted. The truth is that in one sense we feel some sympathy for Dr. WALLACE. He surely must have been primed by persons of no standing, who were either ignorant or unworthy of credence, and he has suffered the consequences. His own statistics—which he stated he had prepared himself, and had indeed gone over "all of them twice"—he is of course responsible for; and with regard to them we cannot but feel that if this is all that science can do for the anti-vaccinationists the scientific value of the operation stands more than ever confirmed.

NOWHERE have the reports from Berlin excited a deeper and more painful interest than at the various sanatoria devoted to the treatment of phthisis. Climatic change, coupled with tonic and hygienic measures, has hitherto been our mainstay in the treatment of pulmonary phthisis; but it cannot be denied that the results thus obtained, though occasionally brilliant, are more frequently partial and palliative than curative, and always require much time and patience. It is only natural that patients should look with eagerness to a new line of treatment, which would seem to offer a short cut to that goal of recovery to which, even under the most favourable circumstances, they were hitherto travelling only by tedious and interrupted stages. Hence the flight to Berlin, of which the results cannot fail to be in many cases disappointing, if not disastrous. We propose to consider the points which should be weighed most carefully before exchanging the brilliant atmosphere of the higher Alps or the sunlit shores of the Mediterranean for the raw air of the German capital in midwinter. We do so entirely without attempting rashly to prejudge the value of the treatment of Professor KOCH, and while adhering to the view frequently expressed in these columns that the facts already elicited give solid grounds for hoping that a genuine advance in therapeutics has been achieved.

In the first place, the painful fact should be realised that no good authority has hitherto held out any confident hope that the new method of treatment will be available for advanced cases of pulmonary tuberculosis. At the various sanatoria a very large proportion of cases are far gone in the disease, with the lungs extensively infiltrated and with excavation going on. Whatever future investigation may establish, all the evidence at present at our disposal tends to show that the injection of the KOCH liquid in such cases is both excessively dangerous and almost certainly futile. The reaction set up seems most severe, and the risks of rendering necrotic large portions of pulmonary tissue would seem so great that it is still a question whether the application of the treatment to such cases is justifiable at all. We fear the subject of advanced pulmonary tuberculosis will be compelled to realise the bitter truth that the new hope which has been diffused through the world is not for him. He will do well, at least for a little longer, "to bear the ills he has" rather than "fly to those he knows not of." In many cases such patients have, perhaps after many failures, found the climate most suitable to their condition, where they may

"Draw in easier breath from larger air,"

and where, if complete recovery be beyond their hope, they may at least look for a lengthened span of days free from serious suffering. It is impossible to contemplate the spectacle of hosts of such patients hastening pell-mell to the bleak plains of northern Germany without the saddening thought that even the greatest boons conferred on suffering humanity bring some counterbalancing evils in their train. For such evils we do not hold Professor KOCH responsible. His own words have been most careful and guarded, and altogether worthy of his unique scientific reputation; but much has been written, especially in the lay press, which has already been disproved, and random assertions have been made which can only result in disaster to the classes whom it is sought to benefit. This is probably the first occasion in the history of medicine of the merits of a great discovery being

submitted not to experts but *urbi et orbi*, and the spectacle suggests that the old ways of professional reticence and cautious progress were better than the new.

The case of patients in the early stage of the malady is different from the one we have been considering. For them a great hope has arisen, and if they snatch at it too hastily and greedily no one need wonder at what is altogether natural. But such patients, now comfortably established at Davos, St. Moritz, Cannes, San Remo, Arcachon, Palermo, Malaga, Algiers, Egypt, Madeira, and a host of other such resorts, should consider, first, whether such a journey as that contemplated to Berlin can be undertaken by them without the most serious risks; and secondly, whether they are likely to lose much by submitting to the delay which may ensue before the remedy can be made available for them in their present quarters. As regards the first point, the change from Davos, San Remo, or Algiers to Berlin must be regarded as full of danger, even if the journey itself be left out of account. As regards the second, the patients whose case we are now discussing are in many instances making progress in their present chosen resort, and a delay of a few weeks or months is not likely to be seriously hurtful.

There is one motive for repairing to Berlin, the force of which we would not attempt to minimise—viz., the desire to be under the care either of the illustrious discoverer himself or of some of his trained assistants. This is quite natural, but we may well pause to reflect that the treatment is quite new, even in the place of its birth, that the most distinguished observers in Berlin are only feeling their way to a secure doctrine on the subject, and further that in a very short time the experiments now proceeding in Vienna, Paris, London, Glasgow, and elsewhere will have created an independent mass of evidence available to everyone. Science knows nothing of monopoly, but even the apparent monopoly which circumstances have temporarily created in Berlin can only, we sincerely trust, be of very brief duration.

THE question as to whether the addition of preservative agents to foods constitutes adulteration within the meaning of the Act was discussed in two interesting papers read at a recent meeting of the Society of Public Analysts. It appears that a milk-seller was summoned not long since before one of the metropolitan police magistrates for selling milk partly deprived of its cream, and which contained boracic acid, described in the summons as a poisonous ingredient. In one of the papers referred to, Mr. HEHNER stated that so far as he was aware this was the first case under the Sale of Food Acts in which the use of a food preservative is condemned as an adulteration. Conviction, however, was obtained mainly on the evidence of the abstraction of 30 per cent. of the original fat, although the Bench severely reprimanded the defendant concerning the addition of boracic acid. From the fact that not only milk, but other foods, as butter, cream, fish, meat, and meat preparations prepared for the exclusive use of the invalid, are frequently preserved by the addition of boric acid or borax, this question becomes one of considerable importance. The addition of other antiseptics to various articles of diet is also well known. Such are, for example, salicylic acid, sulphurous acid, bisulphites, and benzoic acid or benzoates, which, according to Mr. HEHNER, are gradually taking the place of salicylic acid. In analyses of food, too, made from time to time by THE LANCET, attention has been directed more than once to the presence of salicylic acid, boracic acid, and borax in milk as well as in many prepared foods. From investigations which have been made it is found that 1 gramme of boracic acid per litre of milk retards the coagulation (when the temperature throughout is 15° C.) for from twenty-four to thirty-six hours; 0·5 gramme for only twenty-one hours; whilst at 35° C. this quantity is without effect, and 1 gramme retards the coagulation under these conditions for ten hours. It would be necessary, then, to employ not less than 1 gramme of the acid per litre of milk. Mr. HEHNER finds that in the case of butter a mixture of boracic acid and borax is mostly used. One sample contained, for example, 0·41 per cent. boracic acid and 0·55 per cent. borax. Stress is laid upon the fact that in almost every country in the world, with the exception of England, which was the first to frame food laws, this question has been taken up and the use of antiseptics in food prohibited. France was the pioneer in this direction. The beer imported into that country from Germany was found to contain almost invariably salicylic acid, and the French brewers, in their own interests, of course started action. The Paris Court of Appeal decided that salicylic acid was to be regarded as an adulterant, and to the prejudice of the purchaser—a decision which was based on the report of a Commission of the Académie de Médecine of Paris, appointed to inquire into the action of salicylic acid in food. The commission reported that the use of this antiseptic in food had in many instances been known to produce serious effects, and that small but continued doses were likely to result in grave gastric and hepatic disturbances. In 1888 all addition of salicylic acid to food was prohibited by the Dutch Government, and the Italian Government, in 1887, forbade its addition to wine, and regarded it as an adulteration. The Spanish Government prohibited the use of antiseptics in wine, and the Austrians also regarded salicylic acid in the light of an adulterant. This general prohibition of the use of salicylic acid in particular gave rise to the employment of other substances. In France benzoates were chiefly used, and in Germany sulphites and borates.

Mr. CASSAL read at the same meeting a not less interesting paper on the adulteration of food with boracic acid. Both authors were of the opinion, it is evident, that the addition of a preservative to food constituted an adulteration within the meaning of the Act. If this be so, then a tremendous subject for the consideration of public analysts and medical authorities is opened up. The question will depend largely upon medical opinion as regards the nature of the action of antiseptics (such as have been alluded to) when taken internally. There appears to be little known about the action of boracic acid and borates on the human economy. It has generally been considered the mildest and most harmless of antiseptics. In large doses boracic acid is a gastro-intestinal irritant, and the action of borax is described as being similar. The dose, according to the Pharmacopœia, is from five to thirty grains. The properties of salicylic acid and its sodium salt are,

of course, better known. In the stomach it behaves as a local irritant, causing heat, pain, nausea, and vomiting, unless taken in moderate quantity and well diluted. But then it has been quite recently shown that salicylic acid, according as it was natural or artificial, exhibited different properties, and attention has been called to the fact that injurious physiological action has followed the use of the artificial variety, which commonly contains cresotic acid, and to this substance the injurious effects were attributed. There can be no doubt that the presence of an antiseptic in food would prove injurious to many persons; but, on the other hand, few object to the addition of a minute amount of preservative to cream, butter, and milk, for instance, which are, especially in hot weather, so liable to become unpleasant and objectionable by reason of putrefactive change. The question is an important one, and calls for immediate investigation. The consensus of medical opinion must be gained, and when it has been definitely decided that the addition of antiseptics to foods (added with the avowed object of preserving them) is injurious to health in general, then it will be the duty of analysts to report accordingly, so that the proper authorities may take the necessary proceedings against the vendor of the article. Meanwhile, it is desirable that analysts should not omit to report in their certificates the presence of any preservative which may have been added to any article of food examined.

"CHARITY," says a great authority, "never faileth," and it never will. Even the criticism of this last decade of a critical century, which is meant to chasten and guide it, and which occasionally seems to chill it, only changes its methods and its objects. Last year we had to report an apparent falling off in the great gifts of the charitably disposed. Thus, in 1888 the total of London donations and bequests, according to an article in our contemporary the *Charity Record*, was £840,000. In the year 1889 this total fell to £330,000. This was a fall in one year of £510,000. But in the following year—i.e., 1890—the pendulum of charity swings up again to £769,000, or £439,000 more than in the previous year. There are, so to speak, accidental reasons for this variation, but of late years the searching light of criticism has been very great, and has successfully shown that while there is no excess of kindness on the part of the strong to the weak, there is carelessness of administration which discredits even charity, and which hinders its gifts from attaining still larger dimensions than they have ever reached. There have been some very noticeable individual gifts in the past year, as our contemporary points out. Thus Mr. PETER REID gave £100,000 to found a convalescent hospital. Mr. B. E. FLETCHER offered to build a convalescent home for the patients of the Norfolk and Norwich Hospital, and to endow it with £100 a year, to which offer the Earl of Leicester added a promise of an endowment of £15,000, with a further £5000 should it be needed *to render the home independent of subscriptions*. Mr. R. CADBURY presented to the people of Birmingham Mosely Hall, together with twenty acres of land and a sum of money, equal in all to £30,000, to be used as a convalescent home. Mr. W. H. BARRY'S legacy of £60,000 to the Great Ormond-street Hospital for Sick Children, besides a further £5000 for the new wing, were announced early in the year. In France, M. PARENT DE ROSON left £70,000 for the Paris poor. Prince DORIA left £120,000 for various philanthropic institutions. The Presbyterian charities of Canada and Victoria benefited to the extent of £102,669 and £150,000 respectively by the wills of the late Miss NICHOLLS and Mr. J. THOMPSON. The Emperor of Austria and the Archdukes gave £180,000 to the sufferers from the terrible floods. General SALIVERSTOFF left £119,047 to be used for charitable purposes. It is desirable for our British philanthropists to note that they are well rivalled in our colonies and in continental countries. It must not be supposed that in noticing these large sums we either forget or disparage the smaller contributions, often much more meritorious, from less wealthy givers. Mr. W. F. HOWE, the editor of the "Classified Directory to the Metropolitan Charities," reckons roughly that these institutions have had in the last year an income of nearly five millions, or £4,918,652. The following are the rough estimates of the income of the medical charities: For incurables, £62,045; for general hospitals, £337,251; consumption hospitals, £61,258; ophthalmic hospitals, £9845; orthopædic hospitals, £4963; skin hospitals, £5498; hospitals for women and children, £61,805; lying-in hospitals, £10,538; miscellaneous special hospitals, £107,112; general dispensaries, £28,453; provident dispensaries, £9063; for surgical appliance institutions, £26,968; convalescent institutions, £58,355; and nursing institutions, £11,685.

We have said enough to show that charity is not failing. It need not stop at its present figures, and it would not if the administrators would be a little more confidential with each other, and cultivate more discrimination as to those whom they relieve. Such sums as we have mentioned are a mere drop in the bucket of wealth of a country which pays income tax on over £500,000,000 a year. Once assure the rich that their gifts are needed, and that they are used, not to degrade, but to elevate those who are helped, and we should not see rich people waiting for others to give, but out of their own piles building hospitals and convalescent homes, and making them therewith *independent of subscriptions*, as our italics show the Earl of Leicester wishes the Norfolk Home to be. There is a parsimoniousness and a paltriness about the gifts of some rich men—not to say women—which are best rebuked by the munificence of others.

A WRITER in the *Westminster Review*, somewhat fond of paradox, has put forward what will strike most of his readers as being a very fanciful proposal for improving the conditions under which nurses can be trained for their work. According to his view nursing is "a privileged profession, since a large proportion of those who annually seek admission to the ranks of probationers are refused for the reason that the hospitals to which they apply have fewer vacancies than applications. His assertion is that, on the one hand, there is an unsatisfied demand for trained nurses, and, on the other hand, a large supply of untrained material is offered at the doors of the training institutions; but that the facilities which these latter afford are insufficient to convert the raw material into the finished product in quantity equal to the demand for it. There is, no doubt, some ground for both

the propositions on which this statement mainly rests—that is to say, the supply of volunteers is at the present moment ample, and the demand for trained nurses is brisk; but we greatly doubt whether either of these facts is capable of wearing precisely the aspect which is necessary for the purpose to which the writer would apply them. He proposes to organise the nursing services of our hospitals upon the footing of medical schools, and thinks that if this were done the women who have under the existing arrangement been turned from the hospital doors as superfluous would return as paying probationers, and find room in that capacity where, when they offered themselves as stipendiaries, they were crowded out.

Stated in this bare form, the proposal does not appear promising, and we do not find much to recommend it, even in the arguments put forward in the pages of the *Westminster Review*. Indeed, when carefully considered, the contention of its advocate turns rather to its disadvantage than otherwise. The argument on which he chiefly relies is that since the students for other professions, and notably for the medical profession, are trained at their own expense in self-supporting schools, "if 'nursing' is really worthy of the name 'profession,' there can be nothing very harsh or unreasonable in making its members conform to the general customs and methods adopted by the other professions." A very striking illustration this of the tyranny of mere words, for the only thing which gives to this sentence even the semblance of argument is the fact that nursing is styled a "profession." The term is strictly appropriate, but that is only because it is a term of large significance and comprehends many widely different vocations. To say generally that "other professions" than nursing adopt the academic mode of training is not only incorrect but wildly so. In what are known as the liberal professions it is so, but it is by no means the case with the minor professions as a whole. Accountants, for example, form a large and influential profession, but they receive their professional training not in self-supporting schools, but in offices as stipendiary clerks. *Mutatis mutandis* the same thing might be said of the non-commissioned officers of the army and navy who are trained by service in the ranks. In fact every craft must adopt the form of apprenticeship which is best adapted to the circumstances in which it has to be carried on. Bearing this in mind anyone would come to the conclusion, we think, that the probationer system is the only practicable way of training nurses. Their hours of study cannot be arranged to meet the convenience of the student nor are their studies for the most part of the kind that can be pursued in the class-room and the theatre. On the contrary, they must learn their craft by practising it, and it would be a height of unreason if anyone should propose to assimilate the mode of conducting a nurse's studies to that which has proved eminently successful with medical students.

A profound difference at this point implies a difference all along the line. It is not reasonable to expect that the routine work of a nursing department can be done by amateurs; and certainly such attempts as have from time to time been made to effect such an arrangement have not worked out so as to encourage their repetition. Even if women were forthcoming who could and would devote their time to this occupation free of charge to the institutions which they served, the arrangement would be an inequitable one. But what reason is there to suppose that it is even practicable? The writer argues, that because 1650 women applied last year for 150 vacancies in one of the London hospitals, the vacancies having occurred in a staff of salaried probationers, therefore plenty of women would be forthcoming to provide a staff of paying volunteers. The inference seems to us inverted. All analogy goes to show that the 1650 women who applied for salaried posts would not have volunteered for unremunerated service, and we should have thought that so far as the reviewer's figures had any bearing at all upon his proposal they tended to prove it impracticable. From our point of view this is the one merit in a scheme which, if practicable, would be very likely to be tried, and if tried could hardly fail of doing mischief.

Annotations.

"Ne quid nimis."

DEATHS UNDER CHLOROFORM.

IN recording more deaths from this anæsthetic we must repeat what we have before urged: that more systematic accounts of such occurrences should be given. The lay press, to which we owe most of our information, cannot, for obvious reasons, be expected to give scientific statements as to such fatalities. Coroners are not always, unfortunately, possessed of the special medico-legal knowledge requisite for putting the necessary questions, and it is neither likely nor indeed desirable that reporters for the lay press should be entrusted with systematic statements concerning the facts of the case. It seems to us most important that in every instance cases of death occurring under anæsthetics should be reported in the medical journals, and that there should be stated: (1) The standing and special experience of the chloroformist, the amount of the anæsthetic given, the method adopted, the time required to effect anæsthesia, the amount of struggling; whether heart or respiration failed first; some particulars as to the patient's previous history, whether, for example, he was addicted to habits of intemperance; whether he suffered from any general disease—e.g., such as causes lardaceous change, syphilis, tuberculosis; whether evidence of cardiac or arterial degeneration existed. Under the head of "post-mortem appearances" it seems to us far more important to have lucid statements as to whether the signs of death from asphyxia or from primary cardiac syncope were perceptible, than whether, for example, cardiac valvular disease was met with; while renal and arterial disease, fatty and atheromatous changes, should in every case be noted. Of the deaths recently reported it will not be necessary to detail all. St. Mary's Hospital lost a patient named Amos Wilkins whose finger was to be amputated. The anæsthetic employed was stated to be a mixture of ether and chloroform, and was given by one of the resident medical officers; death occurred while the operation was proceeding. Further, neither the method employed nor the precise cause of death is given, but we gather from the verdict, "Death from syncope," that it was due to heart failure. Another death is noticed which occurred at the Wolverhampton General Hospital. The patient, a healthy lad aged nineteen, was placed under chloroform preliminary

to an operation for removal of necrosed bone from his leg. The patient appears from the evidence at the inquest to have entertained a dread of the anæsthetic, and to have been permitted to select chloroform in place of the ether with which presumably the anæsthesia was being commenced. Dr. McMunn, who made the necropsy, suggested struggling may have occurred, the strain of which might have prejudicially affected the heart. Anyway, after anæsthesia was produced, and as the operation was being commenced, the patient became pallid and the heart's action could not be felt. Prompt measures succeeded so far that slight cardiac and respiratory restoration occurred, only to be completely stopped after three or four minutes, and this in spite of forty minutes' artificial respiration. After a careful post-mortem examination Dr. McMunn stated that in his opinion death had resulted from syncope produced by the action of chloroform vapour upon the heart. The Guest Hospital, Dudley, was the scene of a fatal chloroform case. The patient, aged forty-six, was to have an operation performed on his arm. The anæsthesia, it was stated, was produced in seven minutes, one drachm of chloroform being used. The operation was then commenced, but in two minutes had to be stopped, as the heart's action and respiration were found to have ceased. The breathing, it is mentioned, became stertorous; but what was the cause of this, whether mechanical or whether due to an accumulation of chloroform in the circulation, is not explained. Dr. Higgs, writing to a local paper, expressly denies that an over-dose of chloroform was given, or that any reflection could be cast upon the chloroformist. The post-mortem examination gave no evidence of organic disease.

METHYLENE BLUE AS AN ANODYNE.

IT seems not improbable that a "cellular" theory of therapeutics may arise which will certainly open new fields for investigation. The researches of Professor Ehrlich into the action of methylene blue as a staining reagent for the central nervous system are well known. He has proved that this stain has a peculiarly selective action on the axis cylinders of motor and sensory nerves. Together with Dr. Lippmann, Professor Ehrlich has been led by his previous investigations to try experiments with methylene blue on living animals, with the result that these observers have found that this dye possesses analgesic properties of some considerable power. Their results are published in the *Deutsche Medicinische Wochenschrift*, No. 23, 1890. For their researches they used a preparation of methylene blue which was chemically pure and quite free from chloride of zinc. A 2 per cent. solution of the drug was taken, and injected hypodermically in doses ranging not higher than 0·05 cc. It was also given in gelatine capsules, containing a finely powdered preparation in doses of 0·1 to 0·5 grm., the maximum daily dose being 1 grm. Given in this way it produced better results than when administered hypodermically. The injections were painless and produced no local results beyond some slight swelling at the point of puncture. No bad symptoms were produced. The appetite, digestion, pulse, and general strength underwent no change; vomiting occurred in two cases only. The methylene blue was absorbed very quickly; a quarter of an hour after the smallest doses (subcutaneous or by mouth) were administered the urine became a bright green, after two hours dark green, and after four hours dark blue. The urine at no time contained any albumen or other pathological constituent. In the saliva a bluish tinge was noticed, and the same appeared also in the fæces; there were no changes of colour in the mucous membranes or conjunctivæ. In certain forms of painful local affections the therapeutical results were remarkable; the drug acted as an anodyne in all neurotic processes and rheumatic affections of the muscles, joints, and tendons. The action of the drug commenced about two hours after it had been administered. Its effects were gradual, but after some time pain was greatly lessened or entirely abolished. Its action was purely analgesic, having no effect on the actual inflammatory processes. The drug did not seem to lose its effect by repeated doses—that is to say, the patient did not become intolerant to it. It had no antipyretic properties; it was found useful in angiopastic migraine. As regards a comparison between it and other anodynes, no definite conclusions have yet been arrived at. Compared with antipyrin it has the advantages of smaller doses, painless injections, and cheapness. Owing to the time which elapses before its action manifests itself it might probably be used with advantage in combination with other drugs—as, for instance, with morphia—so as to prolong the time of freedom from pain.

THE KOCH LIQUID IN SWITZERLAND.

AT Zürich on the 22nd ult., at a meeting of the Medico-Chirurgical Association, Professor Eichhorst read a paper on his experiences of "Kochin," which he injected in twenty-five cases occurring in the medical wards. No appreciable result followed these injections, and the professor, after a full account of the circumstances in which each injection was indicated and practised, declined to commit himself to any definite or final opinion as to the remedy. He was followed by Professor Krönlein, who had injected the "Kochin" in upwards of forty-five surgical cases. According to him, the results were favourable, and the local reaction answered expectations to the full, placing the diagnostic value of "Kochin" in the clearest light so far as surgery is concerned. Professor Krönlein did not aim at any specific cure by his injections, but yet in eight of the patients the improvement was incontestibly marked. On the whole, the profession in Switzerland seems to share the opinion just pronounced on Koch's treatment by the well-known bacteriologist, Dr. Prior, who has injected the liquid in more than one hundred cases: "The remedy, in the patients for whom it is indicated, has its effect in every seat of the special malady, and contributes an unmistakable diagnostic test in tuberculosis. Its effect in all such cases is a healing one, whether the malady be internal or external; but it is only in the commencing stage that a complete cure by it can be hoped for. In cerebral tuberculosis the swelling it induces causes death."

THE EFFECT OF AGE ON THE ABSORPTION OF DRUGS.

DR. YATSUTY, having been struck by a remark of Professor Manassein on the influence of age on the rapidity of absorption of drugs, selected this subject for his M.D. thesis, which has just been published. His experiments were conducted in the Zhitomir Municipal Hospital, of which he is medical officer, and were made on healthy male subjects of from eight to over eighty years of age, the drugs experimented with being iodide of potassium and salicylate of soda. The dose was made to depend upon the body weight, a grain being allowed for each 10 kilogrammes. Thus a boy weighing 25 kilogrammes was given 2½ grains of iodide of potassium or salicylate of soda as the case might be, a man weighing 55 kilogrammes being given a 5½ grain dose. The drug was administered in a gelatine capsule, and the urine examined every three minutes in the case of both salts. With the iodide the saliva was also examined every two minutes. This was not done in the case of the salicylate, as in no case was any evidence of salicylic acid detected in the saliva. Dr.

Yatsuty gives a tabular view of the experiments, the general result being that the younger the subject the more rapidly had absorption, as evidenced by testing the secretions, occurred. Thus a boy of nine, weighing 25 kilogrammes, taking a dose of 2½ grains of iodide of potassium generally gave the reaction in the urine in nineteen minutes; a man of thirty-six, weighing 66 kilogrammes, and taking a dose of 6½ grains, showed no reaction in the urine until thirty-one minutes had elapsed; and a man of seventy-six, of about the same weight, and taking the same dose, showed no reaction in the urine for thirty-seven minutes. Salicylate was absorbed in boys and young men in about fifteen minutes, while in middle-aged men it required about twenty minutes, and in old men about twenty-five minutes. There were some exceptional cases. Thus, some lads of eighteen showed no iodide in the urine until thirty-one minutes; one man of seventy-seven showed it in twenty-eight minutes; so that, although the average rapidity of absorption distinctly diminishes as age advances, it is not possible to say with certainty that a particular individual will absorb one of the drugs mentioned more rapidly than another who is a great deal older.

THE SUSPENSION TREATMENT IN WARSAW.

Dr. AVROKRATOFF, who has tried the suspension treatment on a number of cases of various descriptions in the Warsaw Military Hospital, is by no means inclined to endorse the opinions of those enthusiasts who would have us believe that by this method serious organic disease of the spinal cord, which has hitherto been considered as beyond the reach of treatment, has become curable; but he is not, on the other hand, desirous of denying any usefulness to the method. Of six cases of locomotor ataxy five were in no way improved; but the sixth presented a very marked improvement after suspension had been practised thirty-five times. In contrast to this it was found that functional disorder was affected much more commonly. Thus, all the patients, six in number, who were suffering from neurasthenia present a decided improvement both in their mental and in their general condition after ten suspensions. He is disposed to attribute the good effects of suspension, when they occur, largely to the psychological influence exerted on the patient, a dynamic change being produced on the nervous system. Besides which, the novelty of the process and the exaggerated reports that patients are sure to have heard about the wonderful efficacy of the new method in cases that have hitherto been considered incurable cannot be without effect on the patients who furnish subjects for the suspension treatment. A real physical effect is probably produced on the respiration and circulation; but Dr. Avrokratoff does not think that there is as yet evidence to warrant us in saying that it extends to the spinal cord.

MULTIPLE NEURITIS AFTER INFLUENZA.

THE sequelæ of influenza which have been observed and described are numerous and varied, and a fresh contribution is made to those by H. Westphal in a recent number of the *Petersburger Med. Wochenschr.* The author describes two cases of typical multiple neuritis, of which the first symptoms were manifested in one case seven days after the commencement of the illness, and in the other, eight days. The first patient was a man of twenty-nine, who had first a feeling of coldness and numbness in the fingers and toes, and subsequently weakness of the limbs with difficulty of swallowing, abolition of the knee-jerk and of the triceps-jerk, retention of the abdominal, the cremasteric, and plantar reflexes. There was also slight paralysis of the right side of the face. Under treatment with valerianate of zinc, bathing, and faradisation, the symptoms gradually disappeared, but the knee-jerk remained absent for several months. The second case was also that of a young man. The symptoms in this patient were more severe, and were ushered in by an attack of urticaria. In the course of a few weeks there were general muscular weakness, paralysis of one side of the face and paresis of the other, difficulty in swallowing, and abolition of the knee-jerk. There was also wasting of muscles, both in the upper and lower extremities, and the reaction of degeneration was present, preceded, however, by an increased electrical irritability. There was also ain on pressure over affected nerve-trunks and muscles. There was no impairment of sensibility, and there was rapid improvement after a few weeks, accompanied by signs of considerable vaso-motor disturbance.

GROWING KNOWLEDGE.

THE editor of the *Educational Times* has been insisting in a recent article upon the importance, as he puts it, of "growing knowledge" in the minds of children. The lesson is one which teachers as a body are, perhaps, slow to learn, but it has certainly obtained a considerable amount of recognition in recent times. But, that notwithstanding, the parable of the *Educational Times*, is always seasonable. It is there pointed out that knowledge must be apprehended, appropriated, and assimilated by the mind very much as the elements of vegetable tissue are apprehended, appropriated, and assimilated by a plant. There is a sense in which every student may adopt the aphorism maliciously attributed to the "Master of Baliol College," that

> "What I don't know isn't knowledge."

The binomial theory is useful information for anybody, and indispensable knowledge to the mathematician, but to such as have but little mathematical faculty it is information, and nothing more. So with Greek syntax or Latin composition. To the classic they are elements of knowledge, to the pedant mere shreds of information which never germinate in his mind, and are incapable of ever becoming fused into a coherent habit or scheme of thought. In the acquisition of such indigestible materials there is much pain and very little profit, and it cannot, therefore, be too often or too forcibly brought to the minds of teachers that their true function is not to fill a vacant mind, but to preside over the birth and development of nascent faculties. If the faculties are supplied with suitable pabulum they will spontaneously exercise themselves upon it. The wise teacher is he who happily discerns what faculties are dominant in his pupil, and what treatment is best adapted to stimulate and develop them. This view of a teacher's work receives, we believe, a much more general and effective recognition at the present than at any former period, and we are glad to find it from time to time put prominently forward in the accredited organs of the teaching profession.

TYPHOID IN TUSCANY.

AN Italian correspondent writes under date the 5th inst.:—"Typhoid, closely resembling that which had prevailed in so severe a form during the last four months in Pisa, began to be reported in Florence about the 15th ult., and the municipal authorities lost no time in minimising the conditions of its spread. Every case was vigilantly noted and announced, with the result that from the 15th ult. to the 2nd inst., in a population of about 200,000, resident and migratory, 764 cases in all were reported, with a mortality of 7 per cent. Within the last forty-eight hours there has been a steady decrease in the numbers attacked, and of these, since the first appearance of the malady, few, if any, have occurred among the English-speaking colony. Certainly, no death from typhoid in the latter section of

the Florentine population has yet been announced. On the whole the sanitary condition of Florence has been better this year than last, and better last year again than during its predecessor. The alarm sounded since the 15th ult. has had the salutary effect of putting the more enlightened part of the population, including the foreign community, on its guard, and, the water-supply having been suspected, the precaution of boiling it (and boiling it thoroughly) before use has been taken in private houses, as well as in the numerous hotels and pensions. To such and similar measures must be ascribed the fact that at no time since Dec. 15th has the malady attained anything like the proportions it assumed in Pisa; and, indeed, as already stated, the number of cases within the last twenty-four hours has been less than during the same period immediately preceding. The fact that other communes in Tuscany, and other towns in those communes, have been visited by typhoid as well as Florence, seems to dispose of the supposition that the water-supply of the latter city is exceptionally tainted. No doubt it is not in every quarter above suspicion, and there is far too extensive a use of well-water instead of the 'acqua potabile.' Even this latter has been said to have become contaminated by sewage, and the municipality is at present investigating whether and to what extent the report is well founded. But the travelling public need be under no apprehension of visiting Florence, the local sanitary authorities having taken every precaution to minimise the conditions favourable to typhoid, and especially to suspend the supply of water from any source which is not above suspicion."

SIR WALTER FOSTER.

SIR WALTER FOSTER has resigned the physicianship of the General Hospital at Birmingham, after twenty-two years' service. He previously had been physician for eight years to the Queen's Hospital. The occasion called forth an illuminated address from the committee containing every expression of respect and gratitude, as well as hope for the continuance of Sir Walter's "honourable and useful career." Sir Walter, on receiving the deputation to present the address, assured them it was painful to him to leave the duties of the hospital, but that he did so to give other men the opportunities and advantages he had enjoyed. The motive is a good one, and the action worthy of imitation. Sir Walter has many other outlets for an energy that is still unabated. He is lured to other than professional fields of labour. But he is a good physician, and we still venture to hope that in the study and practice of medicine he will find recreation and even rest for himself, as well as time to promote the interests and the efficiency of the profession.

MUSCULAR ATROPHY AND ARTHRITIS.

THE existence of muscular atrophy in connexion with joint changes is familiar to all, and the explanation of its occurrence which is usually offered is that it is dependent in the first place on the suspension of physiological activity necessitated by the diseased condition, and in the second place on neuritis following the affection of the joint. The close interconnexion of nerves and joints is manifested under various conditions—in none more graphically than in the class of cases to which Weir-Mitchell has drawn attention, those, namely, in which joint changes follow on the direct injury to nerves. Raymond (*Revue de Méd*, No. 5, 1890) has recently made experimental researches with a view to elucidating the pathology of the condition. He calls attention to the conditions usually found after injury to a joint—viz., functional weakness of the limb, increased superficial and deep reflexes, muscular twitchings, a raised irritability to faradaic stimulation, disturbances of sensibility, and, most important of all, muscular atrophy, related especially to changes in the interfibrillary substance of muscle. He found experimentally that this atrophy did not take place when the posterior roots of the cord were divided or destroyed. He found also that the physiological defect in the lateral columns in newly born animals and division of one of those tracts in full-grown animals favoured the progress of atrophy in the limb a joint of which had been injured; while hemisection of the cord in a case in which a symmetrical joint injury was inflicted favoured atrophy on the side on which the hemisection had been performed. No anatomical change was discovered in the anterior horns of the cord or in peripheral nerves; so that the results of the researches of this author seem to point to a reflex trophic condition as the cause of the atrophy in this class of cases. It remains to be seen whether future experiment and clinical observation will confirm this view.

TREATMENT OF ERYSIPELAS.

AN elaborate research, clinical and bacteriological, has recently been published by Professor Nussbaum's assistant, Dr. Julius Fessler, on the treatment of erysipelas by ichthyol, a plan which has been for some years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and its neighbourhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment as compared with ordinary methods are embodied in several instructive tables. From these it appears that while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5·6 days.

EARLY MARRIAGES IN INDIA.

THE Government of India has decided to legislate on the subject of the age of consent by a simple amendment to the penal code, substituting the age of twelve for that of ten. It has been wisely determined to couple the announcement with the assurance that no interference with social or religious customs affecting early marriage is contemplated, a course which it may be hoped will satisfy those who saw in the suggested reform a covert attack on ancient customs.

POISONING BY BROMIDE OF ETHYLENE.

A CURIOUS, but unfortunately fatal, mistake of a chemist has occurred in Poland, in consequence of an order for bromide of ethyl, which was required by a surgeon for use as an anæsthetic. This substance has been, as is pretty well known, a good deal used by dentists and surgeons in Switzerland and Germany instead of ether or chloroform, especially for small operations, and it has generally proved fairly satisfactory. In the case in point the operation proposed was external urethrotomy in a strong young man, for whom bromide of ethyl seemed to the operator to be peculiarly suitable. The chemist, however, sent a bottle of bromide of ethylene, a very different substance, but the mistake was not recognised, and so the patient was made to inhale some ten drachms of it. No anæsthesia

was produced. At night uncontrollable vomiting came on, and there was suppression of urine. The next day the vomiting continued, in spite of every remedy that could be thought of until the patient died. No urine was passed, and the bladder was quite empty. At the post-mortem examination hyperæmia of the meninges of the brain and of the lungs, spleen, and kidneys was found. The liver was much enlarged, and was of a dirty yellow colour, the cells were affected by granular degeneration, and the viscera smelt strongly of the garlic-like odour of bromide of ethylene. The puzzle is, how a pharmacist came to have such a substance as bromide of ethylene. Had the name suggested by Merck—æther bromatus—been employed, there could not well have been any mistake; but *æthyl* might perhaps, if badly written, be confused with *æthylen*.

THE INSUFFICIENT RECORDS OF THE OUT-PATIENT DEPARTMENT.

AN inquest has been necessitated at Hanley by Mr. G. S. Hatton, assistant surgeon of the North Staffordshire Infirmary, refusing to give a certificate of the death of a child on Dec. 24th, which he believed he had not seen since Nov. 18th, though the mother gave evidence that she had taken the child to the Infirmary on Dec. 16th, and seen the junior resident surgeon. The coroner complained of the effect of the refusal necessitating an inquest and delaying the funeral a week. The jury called the attention of the Infirmary Committee to the insufficient records of the visits of out-patients, and as to their identity, and they considered that in the case of death there should be some record of the disease when last seen by the surgeon, and also that the latter should give a certificate when applied to. This is a most doubtful recommendation. The jury would have done better to condemn the out-patient system as inapplicable to serious cases with fatal tendencies, and calculated to cover neglect of all sorts.

DISEASED PRIZE CATTLE.

THE annual exhibition of prize cattle, which is now held at the Agricultural Hall, would seem to have reached perfection, in the sense of demonstrating the best methods of breeding and feeding cattle, sheep, and pigs to the maximum of fatness, at the earliest age for obesity. The mountains of fat recently exhibited were, as Dominie Sampson would have said, "prodigious!" But the production of quality, no less than quantity, in a given time, for the speedy return of capital to the owners, should be the true aim of a system which has for its object the rearing of animals of the highest nutritive value as human food. For this purpose the Smithfield Cattle Club was instituted in the year 1798—nearly 600 years ago. It will be in the recollection of our senior readers that in 1857, or after more than fifty years' trial of the system which had been pursued, the question was first subjected to the test of scientific investigation by Mr. Gant, whose post-mortem examination of the animals then exhibited disclosed the diseased state of nearly all the vital organs in the specimens which had been reared in the school of over-feeding, had graduated, and taken the highest honours. In them the heart especially had undergone either true fatty degeneration or excessive fatty infiltration, and the circulation of the blood, therefore, was so feeble as would soon have caused the death of the prize beast—Devon, Hereford, or Shorthorn,—whose vast bulk delighted the eyes of its bucolic admirers, and attracted the *poking* curiosity of the public. Sheep were even more diseased than their fellow-sufferers, and in a few days replenished the wasteful grease-pot. Pigs had borne the experiment of over-fattening better than either their bovine or ovine friends, but they lay dying of asphyxia. The results of Mr. Gant's observations were republished in nearly all the London and provincial newspapers, and THE LANCET prominently drew attention to the subject. Subsequently these investigations appeared in the form of a "New Inquiry" by the author, fully illustrated by coloured lithographs and woodcuts of microscopic drawings (John Churchill). For some years afterwards fat diminished, and flesh came on, with of course a due proportion of the former texture, as showing the character of the breed. But the recent show was probably more notable for the pathology than the physiology of its exhibits, and an after-death examination would have revealed some unpalatable dietetic truths. The monster beast of all, who carried the palm, was too weak to stand, and having been removed from the scene of its temporary triumph, lay down in piteous appeal to future breeders, feeders, judges, and exhibitors of cattle.

SANITATION IN AUSTRIA.

THE provincial sanitary authorities in Austria would seem, judging from recent revelations in the Reichstrath, to be even more remiss than the authorities in most parts of this country in carrying out their duties. With us the authorities in health resorts, generally at least, make some show of zeal regarding the sanitation of their districts, but some of the more important health resorts in Austria, such as the neighbourhood of Salzburg and Styria, are shown by statistics to be anything but healthy. It is said that more than 100,000 persons die in a year in Austria from preventable diseases. It is proposed by the Government to appoint inspecting officers to visit the provinces and urge or compel the local sanitary bodies to exert themselves.

EARLY SPONTANEOUS RUPTURE OF THE UTERUS.

A CASE of rupture of the uterus is reported from Mexico by Dr. Eduardo F. Plá in the *Crónica Médico-Quirúrgica*, which is in several respects almost unique. The patient was a married woman of twenty-one years of age, who had had only one previous pregnancy, which terminated satisfactorily five years before, since which time she had had no illness. A medical man was summoned hastily, as she had been suffering intense pain, and had suddenly become cold and collapsed. When he arrived she was dead. The official post-mortem examination was entrusted to Dr. Plá, who, after noting the absence of any marks of violence, opened the abdominal cavity, and found a quantity of blood and coagula, also the amnion containing a four months' fœtus, with umbilical cord and placenta. This had escaped by an irregular rent across the fundus of the uterus three inches in length. There were coagula in the cavity of the uterus, but no pus or evidence of inflammation in the pelvic organs. The uterine wall was found to be extremely thin in the neighbourhood of the rupture—under two millimetres,—though in other parts it was as much as eighteen millimetres in thickness. A microscopical examination, which was made by Dr. San Martin, showed that in the region of the rupture the muscular coat was practically absent, being represented by a very few attenuated fibres; the mucous coat, too, was absent, being replaced by fibrous tissue without glands and with scarcely any vessels. Altogether the appearance was that of a cicatrix, but no history of any injury or disease could be obtained. The placenta was perfectly normal. Charpentier mentions eight cases of uterine rupture at or before the end of the fourth month of pregnancy, and Dr. Plá mentions two cases cited by Burns in addition; these ten being all that he could find in literature. In most of these cases the patient was much older and had had difficult previous

labours, and, again, the seat of the rupture was much less commonly the fundus than the lower segment. In the present case, being over the insertion of the placenta, the hæmorrhage was great, and so led to the immediate fatal termination, whereas several of the other cases died later from peritonitis, and in one, that recorded by Dr. Drake, the fœtus ultimately made its way out through an abscess in the umbilical region.

ALCOHOL AND DIGESTION.

FROM experiments made on himself by Dr. Eichenberg some further knowledge of the effect of alcohol on digestion is obtained which contrasts strongly with the teetotal lecturer's experiment showing how digestion in a glass vessel is retarded by alcohol. Dr. Eichenberg found that a small dose of strong alcohol—e.g., brandy—shortens the time that food in general, whether animal or vegetable or a mixture, remains in the stomach by more than half an hour. A similar but not quite so marked an effect is produced by a dose of dilute hydrochloric acid or mustard. Pepper and condurango diminish the time the food remains in the stomach by about a quarter of an hour. Beer and an infusion of rhubarb had no effect.

COMPRESSION MYELITIS.

IN a series of experiments on dogs Rosenbach and Ascherbach (Virchow's *Arch.*, cxxii., Heft 1) observed the changes in the spinal cord subsequent to compression by small silver balls and rods. The symptoms developed were weakness of both extremities, greater on the side of operation, spastic or ataxic gait, increased reflexes, and delayed sensibility to pain in both extremities. The operations were carried out on the lower dorsal and upper lumbar divisions of the cord; accordingly the extremities affected were the hind legs. Pathological changes were confined to the point of compression or its immediate vicinity, except in cases in which the animal lived more than a month, in which case ascending and descending degenerations were found to be present. The cases roughly divided themselves into two classes. In one the chief changes were in the white matter, consisting of destruction and disappearance of the axis cylinders chiefly, the grey matter showing infiltration of its network and degenerative changes in the large cells. In the second class there were few, if any, changes in the white matter, but in the grey matter there was an exudation, and around it cracks and holes, apparently the result of the absorption of the network. Alteration of the neuroglia and of the connective tissue elements was observed apparently as a secondary effect of irritation by the products of the destructive process.

HOSPITAL REFORM AND PROVIDENT DISPENSARIES.

THE evidence before the Birmingham Hospital Reform Committee was closed early in December. One of the last witnesses examined was the Rev. Joseph Wood, who eulogised the Leicester Provident Dispensary. In Leicester only one in twelve of the population became out-patients, whereas in Birmingham one in three did so. There were 35,000 members in the Provident Dispensary of Leicester, and only fifteen were reported unfit by the medical men. There were twenty medical men, and the average amount received by them for this enormous quantity of work was £150 each. We regret that Mr. Wood did not express any dissatisfaction with the inadequate and paltry subscription of the members—1*d.* per week for the father and 1*d.* more for the mother and all children under fourteen. The reverend gentleman advocated the withdrawal of the whole of the Hospital Saturday Fund of Birmingham from the hospitals and the establishment with it of provident dispensaries, on the ground that working men feel that they had a claim to medical relief. This is a bold proposal, and one not very complimentary to working men. The Hospital Saturday movement was distinctly meant to give working men the opportunity of contributing to hospitals. Even if their out-patient department were completely abolished, as Mr. Wood advises, hospitals would still be entitled to the liberal subscriptions of the working classes, who principally benefit by them. We shall refuse to believe that any great number of working men take the mercenary view that in a contribution to the Hospital Saturday Fund they are paying for ordinary medical attendance. Mr. G. Franklin of Leicester said there were many members of the Dispensary who had no right to be such on social grounds. He thought a larger weekly payment could be made, and that 1½*d.* could be afforded as well as 1*d.*

ADVICE TO HUNTING MEN.

DURING the past five weeks the continued frost has rendered hunting impossible, to the intense disappointment of all men given to the chase of the fox, stag, or hare. The owners of beagles may have had a run in the snow more for exercise than for sport; but hounds, horses, and men must have sadly lost condition and put on useless flesh in the place of muscle, for there is no exercise that will give the same condition as actual hunting. Besides, many men past middle life are able to bear long-continued exercise in the saddle without fatigue who could not possibly undergo other exercises which would place them in the same hard condition and good health as does actual hunting. Younger men may skate and undergo other athletic practices which replace their accustomed horse exercise, but the older man's heart and respiratory powers, and often stiffened joints, exclude him from this advantage. What is he to do? We fear there is but one alternative for him when he cannot hunt, and that is to take physic, or, in suitable cases, the occasional use of the Turkish bath. A well-known titular member of the profession, whose name we need not mention, after a life-long experience of practice among hunting men, arrived at this conclusion, and we believe it to be a right one. "Nimrod," in his famous book on the conditioning of hunters, came to the same conclusion in reference to the horse; indeed, he goes further, and states that the best condition can only be obtained by giving the animal an alterative dose of medicine every month or six weeks to carry off the humours which are apt to result from the high feeding necessary to condition. The same conclusions may be arrived at in the case of the rider. The old practice of giving a blue pill and black draught was not wrong in principle, though it was probably too indiscriminately resorted to. Improved methods and more refined medicine have naturally come into use with the advance of our knowledge of drugs; but the principles to be kept in mind remained the same. The liver should be acted on, the intestines stimulated, and the accumulated humours purged from the blood. A combination of hepatic stimulants and saline aperients, proportioned in activity to the requirements of the individual, taken once or even twice a week, will be found to check grossness, and fit a man to resume the saddle—when weather permits—with lessened inconvenience and an alacrity for the sport which he would not otherwise experience.

BOARD SCHOOLS AND FILTERS.

HOSTILE critics of School-Board expenditure could hardly be expected to pass over in silence the statement of surcharges lately brought forward in the half-yearly audit of the Tottenham school accounts. These amounted

to the sum of £17 18*s.* 6*d.* for various scientific instruments, such as a cyclostole, hectograph, microscope, &c., besides £53 expended on filters. The payments, though supported by several ratepayers, and, as far as related to the purchase of filters, by a medical member, were vigorously opposed by the official auditor. The dispute as regards instruments, which must be considered as luxuries of education, may best be left in the hands of those immediately interested. A more vital significance attaches to the arrangements for ensuring a pure-water supply. The necessity for filtration, however, is a matter still open to discussion, and this fact was illustrated in the case quoted by a considerable divergence of opinion. Analyses by Dr. Frankland were stated to have shown the excellent quality of the Tottenham drinking water. Assuming that this statement is correct, it is obviously impossible to maintain the existence of any real necessity for filtration (though its advantage is no less obvious), provided that due care be observed in regularly cleansing any cisterns connected with the water-supply of the school. The argument that the school children use unfiltered water in their homes is of little value, since the hygiene of a public institution can allow no standard but that of purity. It is for the local authorities, therefore, to decide how far Dr. Frankland's observations are still justified and whether they have been modified by any unhealthy conditions connected with the school itself. The proved existence of any impurity or seriously qualifying circumstance would necessarily call either for its immediate removal or for the introduction of a filter which, whatever its kind or its cost, must suffice for its intended purpose.

FATAL STOVE FIRES.

THE French authorities cannot be blamed for the accidents which have recently occurred in consequence of the use of stoves. Early this winter the walls of Paris were posted with official bills, issued by Government, warning the population against the danger that might result in the use of stoves for warming purposes. Many of these stoves, if kept in perfect order, are not dangerous; but they get out of order, and then give off so large a quantity of oxide of carbon that fatal results ensue. This week three lives have been lost in Paris in consequence of the use of such stoves in sleeping apartments. Last year eight seamstresses fainted while employed in a workshop in consequence of the fumes escaping from the stove that warmed the room. Yet fuel, too dear in London, is so much dearer in Paris that it is not surprising so many stoves are used. They ensure a more complete combustion of the fuel, and give much more heat than an open grate. It is not surprising, therefore, that accidents have happened during so severe a winter as the present; but these calamities point to the necessity of further practical progress in the science of warming and ventilating.

LONGEVITY IN THE SOCIETY OF FRIENDS.

THE Society of Friends in the United Kingdom have recently issued their annual obituary of members, and the report includes a table showing the mortality statistics of the Society during the last three years, which contains some figures which are not without interest, although they cannot be accepted as satisfactory evidence of the longevity of members of that Society, if that term is used in its correct sense—namely, the mean duration of life. The report states that the number of members of the Society is about 15,500, and as the deaths in the three years averaged 256 per annum, the mean annual death-rate may be calculated to have been 16·5 per 1000. Bearing in mind the strong evidence that is supplied by the figures of the high mean age of the members, this mean death-rate may be accepted as proof that the health condition of the Society is eminently satisfactory. It may be noted that 480, or 61 per cent., of the 769 deaths in the three years were of persons aged upwards of sixty years, and although this remarkable fact, without information of the proportional age-distribution of the living members of the Society, gives no clue to the mean duration of life among Quakers, it affords conclusive evidence that the death-rate at all ages of the members is remarkably low. Accurate and complete mortality statistics of the Society of Friends would possess much statistical value, and it is to be wished that it might be found possible another year to supplement the information now given concerning the ages of deceased members, by a statement of the numbers of the members living in each of the same age-periods. Taken as an abstract fact it is certainly remarkable that only fifteen deaths of children aged under five years occurred during the year 1888–89 among the 15,500 members of the Society of Friends. From a statistical point of view, however, it is essential to know whether this is due to the fact that the rate of mortality among the young children of Quakers is so abnormally low, or to the more probable fact that the members of the Society of Friends include a very abnormally small proportion of young children.

THE REPEAL OF THE MUZZLING ORDER.

NOW that the dog-muzzling order has been withdrawn, opinions respecting the necessity for maintaining this effectual preventive measure appear to be as much divided as ever. During the period of nearly two years within which the use of the muzzle has been compulsory the annual number of reported cases of hydrophobia among dogs in the metropolis has fallen from 400 to *nil*. The last quarter of 1890 was entirely free, but in that preceding there were eight cases. The fact of immunity during three months is, in our opinion, hardly sufficient to justify the total discontinuance of a well-proved preventive method. It were no excess of precaution to have allowed another quarter to elapse in order to provide against the conveyance of the disease by dogs coming from the provincial districts. It should not be forgotten, however, that one, if not the principal, advantage obtained by muzzling—namely, the discovery and removal of ownerless curs, the class of dogs most usually affected by rabies—is provided for under the new regulation, which abandons the muzzle only to substitute the labelled collar. Time only can show whether this change, which is a concession to the urgent protests of dog owners, will equally suffice for the intended purpose. Meanwhile, we shall await the issue with interest and hope, but not without a certain misgiving.

STREET MAN-TRAPS.

THE ordinary traffic of the streets is surely associated with dangers enough without the addition of such as result from careless mismanagement of the very roadway itself. Yet these are not wanting. We do not refer merely to any risk of the season such as that occasioned by non-clearance of snow-laden thoroughfares, but to a cause of mischief ever latent and even more hazardous—namely, the trap-door which ought to cover the entrance to the cellarage of many warehouses, but which is too often left agape, with no sufficient barrier or voice of warning to turn the steps of any unwary foot passenger. Such neglect is highly culpable, even in broad daylight, but the degree of blame as well as the possibility of most serious injury are immensely increased by such perilous conditions as are added by the twilight of evening or the too common incident of a London fog. Mere business caution should remember, if humanity be forgetful, that the injured wayfarer who may suffer by such neglect has a

claim to compensation for the damage done to him, and business prudence alone might suggest the wisdom of carefully closing such man-traps whenever they are not under the actual supervision of *employés*. Almost identical in character with this form of street danger is that arising from the half-open coal-cellar plate, which may be occasionally noticed in front of private dwellings. This is understood to be kept fastened at all times except during the actual delivery of coal. It is liable to be opened nevertheless by heedless domestics as a ready means of obtaining light in the cellar. Need we remind householders that the near prospect of a bruised or broken limb which consequently menaces every casual visitor is not justified by any assumed necessity for sunlight underground.

THE LANCET RELIEF FUND.

IN consequence of a communication from the Secretary of the General Post Office, it appears we are not permitted to publish the "application form" of THE LANCET Relief Fund as a "supplement." It will therefore be found in our "General Advertiser" columns. It may, however, be easily removed, and can be filled up and forwarded to the Hon. Secretary, Thomas Wakley, jun., THE LANCET Office, Strand, London.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda Pesth.—Dr. Karl Hoor, regimental surgeon, has qualified as *privat-docent* in Ophthalmology.

Dorpat.—Dr. Fürstner has resigned the professorship of Mental Pathology, and Dr. Kraepelin has been appointed in his place.

Munich.—Dr. Karl Seitz has taken charge of the University Policlinic for Children's Diseases.

St. Petersburg (*Military Medical Academy*).—Dr. Lipski has qualified as *privat-docent* in Medicine.

Vienna.—Dr. Egon von Braun-Fernwald has qualified as *privat-docent* in Midwifery and Gynæcology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. K. L. Sirski, Ordinator of the Tiflis Military Hospital, and formerly assistant in Professor Polotebnoff's dermatological clinic in St. Petersburg. He had been offered the professorship of dermatology in Tomsk, but as he suffered from phthisis he felt unable to accept it, preferring to remain in the far warmer climate of Tiflis.—Dr. Albitski, Assistant in the Military Medical Laboratory for the Caucasus.

WE are asked to state that, by permission of the managing committee of the two Colleges, the lectures which Mr. Hutchinson will give in connexion with the post-graduate course will be delivered in the new premises of the Examination Hall. The first lecture will be on Tuesday next, the 13th, at 5 o'clock, and its subject on "The Nature of Lupus with special reference to its Connexion with Tuberculosis." All members of the profession will be admitted on presenting their cards. Succeeding lectures will be on Tuesdays, at 5 P.M. The entrance to the theatre is in Savoy-street.

PROFESSOR VIRCHOW, lately elected by acclamation an honorary member of the Regia Accademia Medica di Roma, has just acknowledged the compliment paid to him in a letter to the president, Dr. Guido Baccelli—"I am proud and happy to find myself so united by a new tie to Italy—proud to be affiliated in Rome to a body so learned and so distinguished, happy to feel myself among new friends.

DR. LORICA has been commissioned by the Department of Public Health at Rome to go to Tuscany, armed with special powers as "medico provinciale," to draw up a report on the sanitary condition of the province. The typhoid epidemic at Pisa, now transferred to Florence and its environs, invests Dr. Lorica's mission with more than ordinary importance.

WE are asked to state that it is proposed to send to a convalescent home three of the patients now undergoing treatment by Professor Koch's method in Dr. Heron's wards in the City of London Hospital for Diseases of the Chest, Victoria Park, E., and that these patients may be seen at the hospital by medical men on Monday and Tuesday, between 3.30 and 4 o'clock P.M.

AT the Medical Society on Monday next Dr. William Duncan will read a paper on Chronic Disease of the Uterine Appendages, with short notes of thirty consecutive cases treated by Abdominal Section. It is expected that Sir Spencer Wells, Drs. Playfair, Priestley, and Cullingworth, Messrs. Lawson Tait, Meredith, Doran, and others, will take part in the discussion.

WE regret to have to announce the death, on the 4th inst., of Mr. Edward Bellamy, F.R.C.S., senior surgeon of Charing-cross Hospital, at the age of forty-eight. We shall, in our next issue, give a sketch of the life and professional career of the deceased surgeon.

PROFESSOR PFUHL, Professor Koch's son-in-law, is to have charge of the new institute for experimental medicine in St. Petersburg.

DEMONSTRATIONS OF DR. KOCH'S TREATMENT IN LONDON.

PROGRESS OF THE CASES.

(*Continued from p. 1410, vol. ii. 1890.*)

City of London Hospital for Diseases of the Chest.

DR. HERON continues to attend with the utmost enthusiasm to those patients undergoing Koch's treatment in this hospital, and it is most satisfactory to record that in the large number of cases which have been treated by him not one has ever given him cause for alarm on account of the treatment. On the other hand, several of the patients have improved to such an extent as to be able to be removed to a convalescent home, and Dr. Heron thinks in a few weeks any assurance office would accept them as first-class lives. Dr. Wethered expressed his conviction that this treatment completely changed the feelings with which the practitioner now approached this malady, and shed a very distinct ray of hope over what had formerly been regarded, even by the most skilful, as a condition in which

"Hope never comes which comes to all."

The three cases alluded to (Nos. 1, 2, and 7) will be submitted on Monday and Tuesday, between 3.30 and 4 o'clock P.M., in the hospital to any medical men who may wish to see the progress which has been attained during the treatment.

CASE 1.—G. M——. This patient, on admission, suffered from a cough, which was very severe, but which has now entirely stopped. Dr. Heron thinks if the fluid can relieve symptoms to that extent, its utility and power are sufficiently proved. From the 21st ult. the patient showed no reaction until a dose of 0·06 was administered, and even then it was very slight. The dose was therefore increased rapidly until the regulation standard of a decigramme was reached, beyond which it was not deemed advisable to proceed. He has injected several doses of a decigramme without any reaction whatever being produced. On the right side the physical signs are completely cleared, and on the left side the crepitations have greatly diminished, and the breath sounds

formerly rhonchial have now become harsh. He has gained 6 lb. in weight since the treatment began.

CASE 2.—A. D——. This patient has now fewer moist crepitations. He had lost weight to the extent of a stone. Since the treatment began he has gained 10½ lb., of which 5 lb. were gained during the last ten days. The patient is to be removed to a convalescent home on Monday.

CASE 3.—B. W—— has been under treatment for four weeks, and is now taking decigramme doses. The case illustrates what has been noticed in several instances, that in tubercular disease accompanied by any other specific disorder the reaction is so extremely slight that it is scarcely possible to be certain that there has been any reaction at all. This patient has had very low temperatures, reaching to 96·4°, 96°, and 98°, all of which were checked by Drs. Scott and Adamson by a test thermometer. On the administration of the remedy the temperature rose to 102·2°.

CASES 4 and 5.—L. F—— and E. R——. The lupus cases continue to show marked improvement.

CASE 6.—H. D——, aged fourteen. This patient has had an attack of pleurisy, which came on on Dec. 18th with distinct signs of septic inflammation of the left base. Injections were stopped on Dec. 16th and were not resumed until the 30th, exactly a fortnight, when a small dose of 0·003 was given. No reaction is manifest, although 0·01 is now administered. In ordinary cases of phthisis attacks of pleurisy frequently occur, and Dr. Wethered has found tubercle bacilli in the clear serous effusions in phthisical cases which afterwards disappeared without any treatment. A case of this kind was communicated by Dr. Douglas Powell in a paper entitled "Tubercle Bacilli of the Serous Membranes," read at the Leeds Congress.

CASE 7.—H. B——. This patient has now received thirty-one injections, and is regarded as one of the most successful cases which have been treated in this hospital. She has been subjected to the full dose of a decigramme without any further effect, and the physical signs have considerably improved.

N.B.—We have to express our thanks to Dr. Scott and Dr. Adamson for the assistance they have so kindly given to our representative from time to time in rendering these reports as accurate as possible.

KING'S COLLEGE HOSPITAL.

Dr. Watson Cheyne has resumed the charge of these patients along with his house surgeon, Mr. R. T. Hewlett, to whom we are indebted for much assistance in preparing the following notes of the cases.

CASE 1.—E. C——. Since our last notice this patient has been injected five times without any reaction, and the wound now resembles a slowly healing sinus. One decigramme of the fluid has now been administered, and the patient has apparently ceased to react. No bare bone can now be felt. There does not now seem to be any disease in the part.

CASE 2.—H. F—— reacts but slightly to the fluid, and the lupus patches in the axilla look very much improved, although the patch on the leg is not so satisfactory.

CASE 3.—R. F——, aged thirty. This case of enlarged glands has now received six injections, after the last two of which there has been no reaction. All observers agree that the glands have diminished much in size. Mr. Cheyne will go on for some time longer with the fluid, before considering whether he will remove the glands by surgical procedure or allow them to be absorbed. Some of them are now quite separate and distinct, and appear as though they could be easily shelled out.

CASE 4.—W. R——. Strumous disease of the left knee-joint. Has had injections of a dose of 0·012, and there is practically no reaction. The leg can now be flexed without any pain, and the measurement of the joint has diminished by nearly an inch.

CASE 5.—J. H——. A case of hip-joint disease. At first very little movement could be obtained without moving the pelvis, and no rotation or adduction was possible. Now both these movements are very apparent, and no case of this disease treated in the ordinary way by rest and Thomas's splint could show so much improvement. The patient failed to react to the last two injections. The case is considered to show one of the best results yet obtained in King's College.

CASE 6.—M. G——. Disease of the left elbow-joint. The reactions in this case continue to be very slight, both locally and generally. There does not seem to be much improvement in the mobility of the joints, probably from the existence of adhesions. The outline of the joint is becoming more defined.

CASES 7, 10, and 11.—These lupus cases are showing a rate of improvement equivalent to that usually observed in such cases

CASE 8.—F. G——. Strumous disease of the right elbow-joint. This patient has had five injections, and 0·01 has now been reached. There is a very slight general reaction, and the power of pronation and supination is much improved. The size of the joint has diminished by nearly half an inch.

CASE 9.—C. K——. Strumous dactylitis of the ring finger. In this case a sinus in the buttock had existed for years, and it entirely healed up about ten days after the treatment was commenced. Since our last report six injections have been administered, but they have produced but slight reactions.

CASE 11.—N. L——. This patient has now gone for a holiday, promising to return to undergo the treatment in a month. There is a marked improvement in her condition.

CASE 12.—The case of anæsthetic leprosy. Much smaller doses are being given, which continue to produce the feeling of suffocation so marked in some of the reactions. Leprosy cases frequently have a laryngeal infiltration which gives rise to this feeling. She expresses herself as feeling much better since the treatment began, and is well satisfied to continue it. The patient seems to have lost a good deal of the melancholy expression she formerly wore.

CASE 13.—W. P——, aged thirty-two, suffering from disease of the knee-joint, which has lasted for four years, has been under this treatment, and has received twelve injections. The last injection was of the strength of 0·02. The knee is now the same size as the sound one, and very little seems to be amiss with it.

CASE 14.—S. W——, suffering from a large lumbar and iliac abscess, which was opened about two months ago. On admission, two large sinuses remained open behind and one in front. He has received eleven injections, and is now being given 0·01. They produced considerable reaction, and all the sinuses healed up within ten days of the commencement of the treatment.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, WATERLOO-BRIDGE-ROAD.

CASE 1.—M. L——, twenty-two years of age. Lupus of nose (under the care of Dr. Sunderland). Duration about five years. Has been scraped twelve times. Family history good. Admitted on Dec. 11th, with well-marked lupus of nose, affecting the whole of the right ala, part of which is destroyed. Nine injections have been given, beginning with 0·002 and increasing to 0·012. The lupoid patch now presents a shrivelled appearance; the area covered by scales is smaller; the right nostril which was formerly obstructed is now perfectly free, and healthy-looking skin has appeared at the margin of the right ala and left side of nose, where lupoid tissue previously existed. The throat is now healthy in appearance. The patient is much pleased with her improved appearance. A point of interest is the development of granulations on the palate and fauces which has been noticed by foreign observers, and which possibly indicates early disease of these parts.

CASE 2.—A. D——, thirty years of age; phthisis of left apex. Admitted on Dec. 10th. Nine injections were given, beginning with 0·001 (after which distinct reaction occurred), increasing to 0·01. No change in physical signs until after third injection of 0·004, when crepitations appeared at left base; and expectoration, which had diminished since admission, increased again to two ounces, and showed a few bacilli of normal appearance, others headed, and numerous granule-like bodies staining like bacilli. Night sweats have been absent since the commencement of the treatment, with less anæmia, cough, and expectoration. The patient expresses herself as feeling stronger and better, but has lost up to the present 12 lb. in weight. No changes noticed in the urine throughout.

CASE 3.—H. S——, aged six years and a half; tubercular glands of neck (under the care of Dr. Sunderland). On admission there were large masses of glands extending like a collar on both sides of the neck from ear to ear, in several places ulcerating and covered with adherent scabs; these were also enlarged. The first injection of ½ mm. was followed by serous exudation from beneath the scabs and injection

of the scars left by the former operation. After the fourth injection of 4 mm. marked swelling of the glands, hyperæmia of the palate, and exudation from beneath the scabs occurred, with marked constitutional disturbance. The scabs were thrown off, leaving moist weakly-granulating surfaces. After each subsequent injection the glands became smaller, and are now not more than one quarter of the size they were on admission.

CASE 4.—P. W——, aged four; adenoids of pharynx (under care of Dr. Sunderland); admitted Nov. 14th, 1890. As a theory has been advanced that adenoids are of tubercular origin, this case was injected. He received seven injections, reaching to 0·008. There was marked hyperæmia and swelling of fauces and palate, and a halo of congestion appeared around each adenoid growth after each injection, but they have remained apparently unaffected. There have been very little signs of constitutional disturbance, and the highest temperature was 99·8°.

CASE 5.—K. G——, aged six. Old excision of hip, with sinuses (under care of Mr. Jacobson). Admitted in 1887, when diseased bone was removed from the tarsus with successful result. While in hospital disease of the hip developed on the same side, for which excision was performed in October last. Six injections were given, the first on Dec. 16th. Well-marked reaction followed each, with increased discharge and swelling around the hip after the first three injections, but subsequently the discharge diminished, the wound healed, and the sinus is gradually closing up and the discharge from it is very slight.

CASE 6.—E. M——, aged five. Early catarrhal phthisis (under care of Dr. Sunderland). Cough, hæmoptysis, and wasting for some months only. A thin child (weight, 2 st. 3½ lb.), with flattening at right apex, deficient movement, impaired resonance and crepitations, and tubular breathing posteriorly. Five injections were given, the first on Dec. 22nd. Very little reaction followed (highest temperature, 100·2°). No evidences of any local action in lungs; the signs at the right apex have gradually cleared up, and there is now nothing abnormal to be heard in the lungs, although flattening and impaired movement continue on the right side of the chest. Unfortunately no expectoration could be obtained, so that bacilli were not detected. The temperature still continues slightly raised and irregular. There has been a gain of 2 lb. in weight. The subsequent history of this case will be of great interest, and the injections have now been discontinued.

CASE 8.—A. K——, aged ten; tubercular peritonitis (under the care of Dr. Haig); admitted Nov. 1st, 1890. Well-marked nodular band passing across abdomen, owing to extensive abdominal disease. Three very small injections have been given, beginning with half a milligramme, but distinct reactions have been obtained, with increased swelling of the abdomen and marked peristalsis and distension of the intestines.

KIDDERMINSTER HOSPITALS.

Five cases have been injected at the Kidderminster Infirmary and Children's Hospital, and six at the Kidderminster Workhouse Infirmary, and, so far as can be judged in a week, with satisfactory results.

ROYAL NATIONAL HOSPITAL, VENTNOR.

Ten carefully selected patients were inoculated at the Royal National Hospital with Koch's fluid. The cases were very carefully diagnosed, and the lesions graphically delineated on outlined figures. Sphygmographic tracings have been taken at the extreme of reaction, and in the interval, affording very interesting results. The parallel tracings of pulse, breathing, and temperature in red, blue, and black inks have been taken every three hours.

KOCH'S METHOD IN THE PROVINCES.

We learn from the *Bradford Observer* that immediately after his return from Berlin with a supply of Koch's liquid Dr. Hime of Bradford offered to Dr. Proctor, medical officer to the union workhouse of that town, the free use of his supply for any suitable pauper cases. This very generous offer will no doubt be largely availed of. Dr. Hime is also treating cases at the Infirmary and Children's Hospital and other poor people in the town. His results up to the present have been thoroughly typical of the results obtained in Berlin.

A small quantity of Dr. Koch's lymph is being sent this week to Madeira by the Cape mail steamer *Roslin Castle*.

HEALTH OF THE IMPERIAL NAVY OF JAPAN.

THE average strength of the Imperial Navy of Japan in 1889 was 8954; the cases of disease and injury amounted to 3621, of which 1038 were treated in and 2583 out of hospital; the number constantly under treatment was 120·36 in-patients and 171·47 out-patients, making a total of 291·83; there were 52 deaths, and 49 men were invalided. These numbers give the proportion of 404 cases, 5·81 deaths, 5·47 discharges by invaliding, and 32·59 constantly non-effective per 1000 of mean strength. The cases and mean sick were slightly higher, but the deaths and invaliding lower, than in the preceding year. Of the deaths 9 were by accidents and violence, including one by a fall from aloft, 3 by drowning, and 5 by suicide, and 43 were by disease. The only epidemic disease which prevailed was rötheln, which broke out on Jan. 31st on board the *Kaimon* in the harbour of Yokosuka. It spread to other ships and to the barracks, and did not cease till June 6th. There were 174 cases treated, all of which recovered; 106 of them occurred in March, 33 in April, and 24 in February. Venereal diseases were the cause of the greatest amount of sickness. Mr. Takaki, in his report, says there were 772 cases and 4 invalided, but the tables show 709 cases of syphilis, 421 of gonorrhœa, 2 of stricture, and 80 of orchitis; if the latter were gonorrhœal, it would give a total of 1212 cases, or one-third of the whole number included in the returns, and a proportion of 135 per 1000 of the strength. There were 27 cases of enteric fever, with 8 deaths, the former being higher and the latter lower than in the preceding year. Diseases of the lungs were the most fatal class, having caused 16 deaths, of which 8 were from phthisis, 1 hæmoptysis, 4 pneumonia, and 3 pleuritis. There were 3 cases of kakké (beri-beri), but it is stated that 2 of them, of which one died, "occurred after the men had run away from the navy." The judicious changes in the dietary effected by Mr. Takaki in 1884, with subsequent modifications, seem to have been effectual in getting rid of a disease which was previously a source of much sickness and mortality. It was not found necessary to make any important change in the food of the men during the year. No information is given in the report as to the number of recruits for the navy who were rejected as unfit for service.

SOCIETY FOR THE STUDY OF INEBRIETY.

A MEETING of this Society was held on the 6th inst., in the rooms of the Medical Society of London, the President, Dr. Norman Kerr, in the chair.

Dr. Crespi (Wimborne) said that though he at one time regarded drunkenness as a purely moral vice, he was now satisfied that, in a later stage at least, it was a disease. Confirmed intemperance was a disease, and it was imperative that there should be changes in the law to empower any relative to obtain a compulsory order to seclude the inebriate in a home for special treatment. There should also be provision for the poor in institutions conducted by County Councils, and paid for out of the rates.

Dr. T. L. Wright (Bellefontaine, Ohio), in an elaborate paper on the Psychology and Responsibility of Drunkenness, discussed the nature and relations of alcoholic intoxication. 1. If insanity was mental aberration consequent on a cause beyond volitional control, then a person drunk on alcohol is, during the drunken fit, truly insane. The laws claim that the drunkard is a voluntary madman. This is incorrect. The inebriate does not voluntarily renounce control. On the contrary, he believes he can control his actions, while he cannot. Though he does not know it, alcohol paralyses inhibition. 2. Alcohol assails every element of human character, every organ and portion of human structure. Alcohol acts as an anæsthetic, and the various alterations in the eye, the features, the gait, and the flow of ideas and talk are not symptoms of increased but of decreased intelligence and control. The perception and the senses are clouded. There are distorted and debased sensations. The insane have similar perversions. 3. In drunkenness there are also instability of movement and incoördina-

tion of function, leading to mental confusion, maniacal tumult, and incoherence of thought. The unity of purpose is destroyed. In most cases of crime under alcohol there has been no criminal intent.

CHRISTMAS AT THE LONDON HOSPITALS.

IN addition to those mentioned in our last issue, the following notices of Christmas festivities have been received:—

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

Through the kindness of several friends the patients at this hospital passed an exceptionally happy Christmas. After an excellent dinner, various games were indulged in, and all enjoyed a homelike evening. Two bagatelle-boards, recently obtained through the liberality of friends, also provided sources of amusement.

ROYAL FREE HOSPITAL.

The students of the London School of Medicine for Women gave an entertainment to the nurses and patients of the Royal Free Hospital on Dec. 18th, 1890. A stage with proscenium and footlights was erected in the large lecture-room, and an excellent performance, consisting partly of tableaux and partly of songs and amusing recitations, was given. Whilst these performances were going on, "Father Christmas," with eight attendants, visited each of the wards and sang carols and distributed sweets for the benefit of the patients unable to be moved downstairs.

GUY'S HOSPITAL.

At Guy's Hospital the wards were gaily decorated with evergreens and Chinese lanterns, and the patients were regaled with roast beef and plum pudding, to which a bountiful dessert was contributed by the students. A band of negro melodists, mainly students, visited the wards during the day and afforded infinite amusement to the patients. There were several Christmas trees, and a supply of articles of clothing were distributed among the children and the more needy of the patients.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, BLOOMSBURY.

An entertainment and Christmas tree distribution took place at this hospital on Jan. 2nd, the patients enjoying a very pleasant evening.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bradford Urban District.—Estimating the population of this Yorkshire borough at 235,056, Dr. Jas. MacLintock puts the birth-rate for 1889 at 26·6 and the death-rate at 19·1 per 1000; and, after discussing the incidence of the deaths in age, sex, and locality, he points out that, compared with the mean for preceding years, the amount of death from zymotic causes was very excessive; measles, whooping-cough, and diarrhœa taking precedence in this respect. It is curious that, whilst diphtheria is so largely taking hold of our urban areas, Bradford remains practically free from this invasion, and only 39 cases were reported under the Notification Act last year. As to enteric fever, this disease, as usual, selected houses and localities having sanitary defects involving nuisance from excreta; and in one special neighbourhood, the condition of which is described as deplorable, scarcely a house had its drains disconnected, the sewer was unventilated, the yards were foul, the privies and ashpits dirty, and houses were built back-to-back. Naturally, Dr. MacLintock was not surprised at the outbreak of enteric fever; but some surprise may be expressed as to the existence of a series of conditions which seem almost contrived to invite a filth disease. A good deal of attention is given in the report to the subject of destructors and to the question of their causing nuisance; but since arrangements were made for the erection of two more of these structures, with a view of reducing the necessity for the dangerous "tipping" still in progress, we may assume that the sanitary department of the borough is satisfied that such appliances can be managed without nuisance. Unfortunately, lead-poisoning still goes on in the borough, and the cause of it remains unsolved. It is to be hoped that the inquiry now set on foot by the Local Government Board into this matter will clear up the difficulties by which it is surrounded. A large amount of current sanitary work is in progress in the borough, and a detailed account of it is embodied in the report.

Bradford Isolation Hospital.—A separate report is issued as to this institution by Mr. Herbert Humphreys, the resident medical superintendent. The hospital has undergone a number of structural improvements, and it is now one of the most complete in the kingdom. The number of patients admitted during 1889 was 490. Of these, 357 were cases of scarlet fever, and 102 cases of enteric fever. Amongst the tables appended to the report is one showing the percentage of deaths per admissions during a term of years from each of the diseases received into the hospital. The varying mortality in scarlatina is striking, and we trust the table will be annually kept up, and a mean drawn of the results shown. So also, more letterpress in amplification of the numerous diagrams would add to the usefulness of the report.

Worcestershire County Area.—Mr. Fosbroke, the county medical officer of health, has recently issued a volume, in which he deals, by way of digest, with the various local health reports, and his perusal of these reports has evidently led to the gathering of a conference of Worcestershire health officers, at which he communicated his views as to the desirability of carrying out the health work of the county and of reporting on certain definite lines. He especially advocated some uniformity in the preparation of annual reports, although he admitted that it would be inexpedient to frame all such reports precisely on the same model. Some attempt at uniformity has been already aimed at in the instructions of the Local Government Board, and, whilst we can conceive that the matter may with some advantage be extended somewhat further, we can also readily understand that uniformity may be carried too far, and that the mere need for making a summary of such reports would not justify a change that would hamper the individuality of the reporter. There are certain tables and statistical returns that should be made on the same lines, if only for purposes of comparison, and we do not imagine, from the nature of Mr. Fosbroke's own reports in the past, that uniformity is likely to be pressed by him beyond bounds that are reasonable.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6328 births and 5343 deaths were registered during the week ending Jan. 3rd. The annual rate of mortality in these towns, which had increased from 21·3 to 27·8 per 1000 in the preceding three weeks, further rose last week to 28·7. The rate was 29·7 in London and 27·9 in the twenty-seven provincial towns. During the thirteen weeks of the quarter ending on 26th ultimo the death-rate in the twenty-eight towns averaged 21·6 per 1000, and exceeded by 0·6 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 16·2 in Leicester, 17·1 in Bradford, 19·6 in Derby, and 20·2 in Hull; the highest rates were 33·1 in Salford, 33·5 in Liverpool, 36·7 in Manchester, and 43·6 in Preston. The deaths referred to the principal zymotic diseases, which had been 511 and 472 in the preceding two weeks, were last week 476; they included 191 from measles, 106 from whooping-cough, 51 from diarrhœa, 49 from scarlet fever, 40 from "fever" (principally enteric), 39 from diphtheria, and not one from small-pox. The lowest death-rates from these diseases were recorded in Portsmouth, Hull, Wolverhampton, and Derby; the highest in Oldham, Salford, Bolton, and Preston. The greatest mortality from measles occurred in Salford, Bristol, Oldham, Preston, and Bolton; from whooping-cough in Newcastle-upon-Tyne, Sheffield, Birmingham, Preston, and Salford; and from "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the twenty-eight towns. The 39 deaths from diphtheria included 25 in London,

3 in Manchester, 2 in Oldham, and 2 in Leeds. No death from small-pox was registered in any of the twenty-eight towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1593, against numbers declining from 2122 to 1685 on the preceding eight Saturdays; the patients admitted during the week were 107, against 125, 108, and 78 in the previous three weeks. The deaths referred to the respiratory organs in London, which had increased in the preceding five weeks from 375 to 806, further rose last week to 927, and exceeded the corrected average by 427. The causes of 156, or 3·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Derby, and Oldham. The largest proportions of uncertified deaths were recorded in Brighton, Sheffield, Preston, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 20·1 to 24·6 per 1000 in the preceding three weeks, further rose to 24·8 during the week ending Jan. 3rd, but was 3·9 per 1000 below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·6 in Leith and 17·8 in Greenock to 29·5 in Paisley and 30·2 in Glasgow. The 643 deaths in the eight Scotch towns showed an increase of 6 upon the number in the preceding week, and included 22 which were referred to whooping-cough, 14 to "fever," 12 to measles, 7 to diarrhœa, 6 to diphtheria, 4 to scarlet fever, and not one to small-pox. In all, 65 deaths resulted from these principal zymotic diseases, against numbers increasing from 46 to 70 in the preceding three weeks. These 65 deaths were equal to an annual rate of 2·5 per 1000, which was slightly below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 12 and 22 in the preceding two weeks, were again 22 last week, of which 14 occurred in Glasgow and 5 in Edinburgh. The deaths referred to different forms of "fever," which had increased in the previous three weeks from 2 to 7, further rose last week to 14, and included 7 in Edinburgh, 4 in Glasgow, and 2 in Dundee. The 12 fatal cases of measles showed a decline of 7 from the number in the preceding week; 6 occurred in Glasgow and 4 in Greenock. The deaths from diphtheria, which had risen from 6 to 9 in the previous three weeks, declined again to 6 last week, and included 4 in Glasgow. Of the 4 fatal cases of scarlet fever 2 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in the eight towns, which had increased in the preceding three weeks from 137 to 182, further rose last week to 191, but were 14 below the number in the corresponding week of last year. The causes of 60, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had risen from 25·6 to 31·3 per 1000 in the preceding three weeks, further increased to 40·6 during the week ending Jan. 3rd, a higher rate than in any week since February last. During the thirteen weeks of the quarter ending on the 27th ult., the death-rate in the city averaged 24·3 per 1000, the rate for the same period being 20·6 in London and 18·6 in Edinburgh. The 275 deaths in Dublin showed an increase of 63 upon the number in the preceding week, and included 7 which were referred to different forms of "fever," 2 to measles, 2 to whooping-cough, and not one either to small-pox, scarlet fever, diphtheria, or diarrhœa. Thus the deaths from the principal zymotic diseases, which had been 9 and 11 in the preceding two weeks, were again 11 last week; they were equal to an annual rate of 1·6 per 1000, the rate from the same diseases being 2·4 in London and 2·9 in Edinburgh. The deaths referred to "fever," which had been 4 and 6 in the preceding two weeks, further rose last week to 7. The 2 fatal cases of measles were the first recorded in the city since the beginning of October. The 2 deaths from whooping-cough showed a decline of 2 from the number in the previous week. The 275 deaths in the city included 44 of infants under one year of age, and 74 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon the numbers recorded in recent weeks. Six inquest cases and 7 deaths from violence were registered; and 77, or more than a fourth, of the deaths occurred in public institutions. The causes of 27, or nearly 10 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

MILK IN CONNEXION WITH SEPTIC DISEASE.

To the Editors of THE LANCET.

SIRS,—A letter appears in your issue of Jan. 3rd under the above title, and signed by Dr. F. P. Atkinson, in which the age of the patients attacked is suggested as a test whether an epidemic be due to infected milk or to other causes. Dr. Atkinson says that, "if by far the larger proportion of individuals attacked be children, it would be only natural to suppose that the milk was in some way or other the cause, inasmuch as children are by far the larger milk drinkers. If, on the other hand, grown-up people furnish the larger number of victims, it is not unlikely defective drainage is the cause." He illustrates his proposition from two outbreaks of diphtheria, and in all probability he was correct in his conclusions in regard to these instances. I would, however, desire to point out that the test does not hold good in regard to typhoid fever, where it will be found that young adults are affected to far the greatest extent. This has been my experience in two considerable epidemics I have recently had the opportunity of investigating. In fact, the average age of the patients corresponded with the average age of those attacked by typhoid from all causes as given in Murchison's book.

In an epidemic of scarlet fever traced to milk recently a large number of adults were attacked in proportion to children. In this instance the adults partook of the poison in the form of cream in tea, a mode of administration which seems in certain cases to increase the virulence of the poison. I know of several outbreaks both of typhoid and scarlet fever traced to milk where the milk has been taken only in tea or coffee, and has produced severe attacks of the disease. The conditions which influence the incidence as to age, of infectious disease due to contaminated milk, appear to be: (1) The age of greatest prevalence of the particular disease—e.g., scarlet fever, typhoid fever, diphtheria; (2) the quantity of milk consumed; (3) the form in which it is taken; (4) the health of the person at the time.

In conclusion, let me mention that in Edinburgh, as no doubt also in many other places, our notification forms include both the age and sex of the person attacked, and this information is given in every instance.

I am, Sirs, yours faithfully,

HARVEY LITTLEJOHN, M.B., B.Sc.

Health Office, Edinburgh.

To the Editors of THE LANCET.

SIRS,—The point raised by Dr. F. P. Atkinson, under the above heading, in your issue of Jan. 3rd, is of very considerable practical importance. He says he has always been sceptical as to the value of boiling milk in order to destroy "germs," and he adduces certain arguments evidently intended to enforce this doubt on his part. But I would submit that his data, as given in his letter, are but of little value. His letter relates to "septic disease"; one of his two recorded illustrations has to do with "diphtheria"; and as regards the other, the nature of the disease is not specified, but it savours rather of enteric fever. And then, to add to the confusion, he writes to Mr. Watson Cheyne to know how far the boiling of milk suffices to destroy "all existing germs"; and this is capped by a statement of the opinion which was held by that expert at a date when he worked with "these things."

May I venture to ask what "things" and what diseases are in question? The point is of the more importance because Dr. Atkinson lays down the general rule that if the incidence of "infectious disease" is mainly on children, it

will only be natural to suppose that milk is "in some way or other the cause," but that the reverse is probably the case if grown-up people furnish the larger number of victims. The adoption of a gratuitous assumption of the above sort may well have made Dr. Atkinson sceptical. The specific diseases with which milk is best known to have causal relation are scarlet fever, diphtheria, and enteric fever. The two former are essentially diseases of childhood, the latter is more especially a disease of young adults. Acting on the rule laid down, diphtheria and scarlet fever occurrences would as such raise suspicion of milk infection, whilst occurrences of enteric fever would have just the opposite effect. But, whilst awaiting further information on the points raised in Dr. Atkinson's letter, may I venture to question whether Mr. Watson Cheyne's answer related to the specific organisms of either of these diseases; and until we learn that I am wrong in this surmise may I be allowed to state that my experience is entirely in accord with that of "the authorities" referred to by Dr. Atkinson. In short, as a matter of practice, it is well known amongst investigators of infectious diseases that persons who use nothing but cooked milk do very largely escape from attacks of the three diseases named during epidemics in which members of the same households who use uncooked milk are specially attacked by them.—I am, Sirs, yours faithfully,

Jan. 1891. PUBLIC HEALTH.

MALARIA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Dec. 13th Brigade Surgeon G. Yeates Hunter mentions heat and malaria as the two great depressants of the nervous system in tropical climates, and these depressing influences are regarded as intensified by the injudicious use of quinine. There are, however, other agencies especially affecting the European in a tropical climate. These are the extreme liability to chill arising from the skin being debilitated by excessive action resulting from heat; the prevalence of a scorbutic taint which may be latent, or only evidenced by conditions not always appreciated as scorbutic; disturbed sleep from very many causes; and not infrequently a syphilitic taint. Continued heat, however, is the most important factor. Even in a temperate climate, a season of extraordinary heat causes loss of appetite and debility by its depressant effect on the nervous system. But the heat of a tropical climate acts still more injuriously. As a consequence the introduction of oxygen into the lungs is lessened in several ways, while the excretion of carbonic acid is diminished, and hepatic engorgement is favoured. Neither with a smaller quantity of urine is so much effete matter passed with that fluid. All this leads to blood deterioration. Dr. Forbes Watson, of the Bombay Army, some thirty-five years back demonstrated that the red blood globules of the European in India (especially during the season of rain moisture and heat) become smaller, lose their smooth appearance, and are studded with refracting granules, which were regarded as of a fatty nature. Had Dr. Watson possessed more modern instruments, it does not appear improbable that we would then have had a description of those changes which have been since noted to occur in connexion with the so-called bacillus malariæ. But continued high temperature, moisture, and other depressing influences incidental to residence in the tropics are quite sufficient to induce that anæmia from which so many suffer in a hot climate (and which is usually termed "malarious cachexia") without malaria. With regard to quinine, I long since wrote that it does not deserve the praise which has been accorded to it, and that a very short experience in the tropics will show that quinine is not the panacea which text-books make it. Paroxysmal fevers often terminate in restored health; hence many things have been credited with antiperiodic powers because fevers have ceased after their use. Amongst such agents are nicotine and charcoal, arsenic and cobwebs, opium and nitrate of potash, fuming nitric acid, strychnine and neem bark, carbolic acid and barbery, hyposulphites and black pepper, alcohol and coffee, also water labeled *peroxide of hydrogen*. As many have written enthusiastically of quinine, so Hare forty years ago wrote of mercury: "No doubt that if not calomel, certainly salivation is an antidote to malarial fevers. The instant a patient's mouth is sore the fever leaves him; from that moment the disease vanishes as if charmed the change is as if from life to death." I have seen patients recover as rapidly and well without quinine as with it, either because there was not any quinine to give them, or because they declined to take European medicine. It has been advanced that the diminution of the death ratio from fevers in India is to be attributed to the extended use of quinine. But, as a matter of fact, the death-rate from all Indian diseases has diminished, as I think, chiefly from better sanitation, from better personal hygiene, and from the abandonment of the spoliative treatment of former times. I have met many native *hakeems* in the East, and most have no confidence in quinine. They assert it "drives the fever inwards" And I think Brigade Surgeon Hunter is quite correct when he observes that "if fever is kept in abeyance [by quinine] a highly irritable condition of the nervous system is established." For instance, a person suffers from irregular or masked ague which he cannot shake off, accompanied by anomalous nervous symptoms. On inquiry it will be found that he has taken large quantities of quinine, which, although credited with the power of curing fevers, is nevertheless capable of exciting a febrile condition. Such a patient will not recover until quinine is discarded, and probably not until Carlsbad salts or some other similar medicine has been prescribed. Then lemon juice may be often taken with advantage. Waring long since remarked that "quinine is inadequate to eradicate malarious poison when it has become engrained, as it were, in the system; it appears probable that its continued use exercises an injurious influence on the brain and nervous system." I will not enter on the *quæstio vexata* of the action of quinine further than by remarking that a sufficient dose will generally lower the temperature, and sometimes delay or even prevent an ague fit. This, however, is rarely accomplished without toxic effects of quinine being manifested, which have often appeared to me to counterpoise the advantage. Sir Samuel Baker wrote of his travels in Africa that when he arrived at a place where he could procure sweet potato whisky, "Every day I drank hot toddy I became strong, and from that time the fever left me," quinine having failed. Both alcohol and opium have been regarded as antiperiodics, and I certainly have known expected paroxysms escape by taking a strong glass of brandy-and-water on the first symptom presenting. It is, however, more with regard to the prolonged use of quinine that I write in support of Brigade Surgeon Hunter's views. He has great confidence in kreat, or chiretta, as a substitute for quinine, and many Indian *hakeems* use this agent in preference to quinine. Years back I often used in dispensary practice, as I think both with economy and advantage to the patients, a tincture of kreat made by macerating 2½ oz. of kreat in the same quantity of alcohol, and administering in doses of two or three drachms. I am, Sirs, yours obediently,

W. J. MOORE,
Surgeon-General.

Jan., 1891.

"MIDWIVES' REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—After reading Dr. Atthill's letter I have come to the conclusion that he has not seen a copy of the Amended Midwives' Bill, but that he has contented himself with collecting from the medical press the opinions of others and presenting them to us in the uninviting form of a *réchauffé* dish. I have been led to believe this because he says the "title" of the Bill indicates that its framers think "registration" all that is needed. Now, the title is described in the first clause as follows:—"This Act may, for all purposes, be cited as the Midwives Act." This is a comprehensive title, and includes education, examination, certification, and registration. These are only means to an end, and that end is lost sight of by many—viz., the prevention of women calling themselves midwives who are not competent to act as such. Dr. Atthill proposes that an Act should be passed to encourage the education of midwives and enforce their examination, but he says nothing about granting certificates or registering them. Examination is of little use unless the person passing it can prove the possession of it by certificate, and the certificate is of no value to one who holds it if others can declare they have it and there is no register to refer to for proof against them. Dr. Atthill is satisfied with "Home Rule" in Ireland as far as midwives are concerned, and kindly wishes to help us with the management of ours. The King and Queen's College of Physicians of Ireland obtained a charter in 1673, enabling

them to examine and license midwives, and punish all who practised without a licence. Midwives have certainly received more attention and been better educated in the sister isle. "As a rule," Dr. Atthill says, "they are efficient and well conducted." He, however, thinks the English midwives we propose to educate and register will not be so satisfactory, for he says "a good many will be guilty, or at least be accused of being guilty of drunkenness, incompetence, infamous or disgraceful conduct, &c." Let us hope this fear is groundless. Some of the objections which Dr. Atthill mentions have already received attention, and will be remedied after the Bill has been read a second time; but a number of them are due to incomplete knowledge or misapprehension of the intention and powers of the Bill. These will most certainly disappear with further enlightenment.

I am, Sirs, yours faithfully,

Upper Wimpole-street, Jan. 1891. JAMES H. AVELING.

To the Editors of THE LANCET.

SIRS,—Every member of our profession will cordially agree with the first part of your leading article on the above subject, but with the sentence, "We are not prepared to say that the State should refuse all recognition of midwives," objections begin. Indeed, the tenour of the first part of the article is contradictory to the latter. Everyone is agreed that the lying-in woman should have the best available attendance—viz., the registered medical practitioner. The difficulty is as to the means which will ensure this desirable end. This difficulty will surely not be met by providing a second-rate uneducated class to compete with him on terms which make competition impossible on his part. Now the difficulty that has arisen in connexion with this Bill is due to the method of its introducers and backers. It is almost incredible that certain members of our profession should have allied themselves with a body like the Midwives' Institute to legislate for us in this matter, instead of taking their own profession into their confidence and ascertaining in a reasonable way first whether legislative steps were necessary or desirable. The course adopted demonstrates clearly the necessity of the better representation of the views of the profession at large, and a representative body to give expression to those views. At present the only views which have a ready expression are those of cliques and corporations, which are not representative. Now, Sirs, I am entirely opposed to legislation on this subject, and I do not agree with the statement that we cannot permanently avert it. We can, if we are sufficiently of one mind in the matter. The reasons of my opposition are: First, no one has made out any case in favour of the necessity of legislation. Dr. Aveling, at the British Gynæcological Society, based his case on figures and facts which were clearly shown to be erroneous, and I have been at present unable to find anyone who can produce either figures or facts upon which to base the plea. My second reason is that it is impossible to provide any legal machinery to prevent the enfranchised class outstepping the limits of its province, and, at any rate, there are no provisions in the Bill at present before us which are sufficient. I will simply, by the way, remind you what has happened in the case of the pharmaceutical chemist. My third reason is, that the establishment of a second grade of practitioners will be detrimental to the science and the profession, and the first part of your article clearly points in this direction. The old apothecary class was, I presume, done away with, because it was found unsatisfactory. It appears to me that it is for the authors and backers of the Bill to show that legislation is necessary, and that what they propose to do is adequate to produce the desired result and is for the benefit of the science of midwifery. Until they can bring sufficient evidence to prove these points the Bill must be opposed to the bitter end.

I am, Sirs, yours faithfully,

Hatfield, Dec. 13th, 1890. LOVELL DRAGE.

ON THE TREATMENT OF CANCER BY THE INJECTION OF ACETIC ACID.

To the Editors of THE LANCET.

SIRS,—It is several years since I first injected acetic acid into cancerous glands. One of the first cases occurred at St. George's Hospital. Some months after amputating a scirrhous breast, the patient presented herself with enlarged axillary glands. In consultation, it was advised that they should be extirpated. I proposed, however, to inject them with acetic acid, and, with the consent of my colleagues, this was done. On the following Wednesday she again presented herself, when it was found that the enlarged glands had disappeared, and that the axilla was in a perfectly normal condition, there being no trace of enlarged glands, either superficial or deep. This patient returned several times to the hospital, but I never saw any further appearance of disease, and, so far as I know, she remained perfectly well. Also, having removed a cancerous breast, assisted by Mr. Pick, Mr. Cæsar Hawkins being present, the enlarged axillary glands were injected, and the result was equally satisfactory as in the former case. I have frequently since employed these injections, and with varying results; but lately I have used them to the breast itself. In a case now under my care the breast has resumed its normal character except that it has become smaller, and seems yet to be undergoing atrophy. With your permission I will send you detailed reports of some of these cases.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Dec. 16th, 1890. B. E. BRODHURST.

RESULTS OF COMPULSORY NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—With your kind permission I should like to make a few remarks on two contributions which have recently appeared in THE LANCET—namely, the letter of Dr. Russell, medical officer of health of Glasgow (Nov. 29th, p. 1188), and the annotation on Dr. Cameron's report to the Corporation of Leeds (Dec. 20th, p. 1345). In both pre-notification and post-notification figures are contrasted, and we are left to infer that notification is triumphantly vindicated.

In the case of Glasgow eighteen weeks only of each of two years are taken, and reference is made to but one disease—scarlet fever—with the following result:

	Cases.			Deaths.		
	Hosp.	Home.	Total.	Hosp.	Home.	Total.
18 weeks, 1880 ..	416 ..	829 ..	1245 ..	52 ..	161 ..	213
18 weeks, 1890 ..	697 ..	434 ..	1131 ..	24 ..	15 ..	39

It is difficult to determine what this table was intended to establish, except that more cases have been removed to hospital in 1890, that the death-rate per case treated in hospital is lower, and that the epidemic has not been nearly so severe as in 1880 (that is, of not nearly so virulent a type). Of those taken to hospital, 1 in 8 died in 1880; but in 1890, during a similar period, only 1 in 29. The figures in 1880, though probably reliable as regards the deaths at home, are misleading as regards the number of cases. But it is an interesting fact that in 1890 the proportion of deaths to cases is the same at hospital as at home: in both 1 in 29. So much for sanitation at Glasgow.

Coming now to Dr. Cameron's report, I see that he selected eight large boroughs with an aggregate population of 1,293,305 in 1881, but the average density is not before me. The mean annual death-rate from the four notifiable diseases—viz, small-pox, scarlet fever, diphtheria, and "fever"—was 2·1 per 1000 living before notification and 0·8 after. This represents an annual saving of life per 1000 of 1·3. But it is a singular fact that in Liverpool, Birmingham, Bristol, and Wolverhampton even more was effected without notification. The aggregate population of these four towns in 1881 was 1,239,872, and their average density 57·3 persons to an acre. In the period 1871–76 their average death-rate from the diseases above named was 2·64 per 1000 (or 0·5 above that of Dr. Cameron's eight towns in the pre-notification period); whereas for 1881–86 it was reduced to 1·01, and in 1887 to 0·82. The saving of life indicated between 1871–76 and 1881–86 was 1·53 per 1000 annually, and, if we take 1887 alone, it reached 1·82. Taking everything into consideration, Leeds and Brighton may well pause before incurring the expense of the Notification Act. Doncaster and other wary towns have decided to do as they have done, and calmly await the promised proof of the efficacy of the much-belauded system, a proof which certainly seems long in coming.

I am, Sirs, yours faithfully,

Kingston-on-Thames, Dec. 22nd, 1890. D. BIDDLE.

URTICARIA DUE TO PRIMULA OBCONICA.

To the Editors of THE LANCET.

SIRS,—Three cases of urticaria, one followed by erysipelas, occurred in my practice last year, all undoubtedly due to the handling of primula obconica. In all three cases the usual characteristic symptoms of urticaria were present—violent irritation, followed by appearance and disappearance of wheals and erythematous rash, going on in one case to severe erysipelas of the face, necessitating the usual treatment. The patients were ladies who, with their brothers, had started a market gardening business in this county, and were all (with two other sisters and the brothers, who did not suffer), constantly handling this useful but obnoxious plant. I quite failed to discover the cause of the complaint, until my attention was called to similar cases occurring in America, and recorded in a gardening paper. I was unable to discover what part of the plant was the irritant, but suspected the very numerous stiff hairs with which the leaves and stems of the plant are covered. I always found that when any of the patients left home for a few days they quickly got well, and the disease returned on rehandling the flower. As soon as I had read of the cases that occurred in America the primula obconica was banished, and neither it nor the urticaria has been seen since in my patients' house. The mother of the two younger patients, who were under twenty-five, was middle-aged. The late correspondence on the subject of eczema caused by primula obconica escaped my observation, though I see THE LANCET every week, and I was only inclined to offer for publication my cases after reading Dr. Burd's (Shrewsbury) remarks in your last number and the appearance of his case of eczema due to handling of the leaves of the Virginian creeper.

I am, Sirs, yours faithfully,

Pantyrodin, Llandebie, Jan. 6th, 1891. GERALD SOUTHERN.

SOUTH AFRICA AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—During the past eighteen months or more an unusually large number of phthisical patients have been induced to visit South Africa in search of its reputed health-restoring influences, and perhaps it is not out of season now to observe that the effect upon those who elected to try this inland high (4500 feet) and dry (?) district has not been by any means encouraging, a large percentage dying during the first year or so after landing in this colony, the cause of death being chiefly due to the exhausting influence of repeated and severe attacks of hæmoptysis. Few seemed equal to the vicissitudes of the climate, but one might add here such non-climatic, injurious, preventable influences as bad housing, a defective and sameness of diet, unskilled nursing, absence of paternal care (nostalgia), the want of inclination or ability for taking plenty of out-door exercise, absence of invalid appliances, continued detention in ill-ventilated rooms, with terribly defective or indeed total absence of proper sanitary conveniences. Again, there may be undue excitement, indulging in late hours, kept up frequently by incessant and untimely visits of curiosity seekers, anxious to see newcomers from the mother country. These attentions flatter the invalid to renewed exertion, to produce the impression "Oh, I'm not so ill," &c. Whatever the cause or causes, the result is not encouraging. Again, I have witnessed the most distressing anxiety and depression caused by the knowledge of the funds being well-nigh exhausted, with no prospect of replenishment—a condition enough to worry the strongest. It seems to me that some young patients arrive from "home" with the idea that they have but to step upon African soil and to sniff the air to effect a perfect cure, when they will be able to support themselves. Alas! when these false hopes or ideas die out, life as a rule dies out also. It should be clearly understood by invalids that South Africa is probably one of the most expensive health resorts, with no *quid pro quo* in the shape of comforts, &c. It might be well to note also that one influence this climate appears at first to exert upon sufferers in the second or third stage of this disease is that of a marked feeling of benefit. Such patients, as a rule, speedily succumb. There seems to be no intermediate influence, and those in an early stage of the disease, if they can only battle through the first eighteen months or so, generally experience permanent benefit. The rule seems to be to improve quickly or die quickly. This fact considerably increases the responsibility of selecting the right cases. It should also be remembered that during the changes of seasons the temperature may vary from much below freezing-point up to 92°, 100°, to even 120° F. in the shade, and that within twenty-four hours it may be necessary to change thin for thick clothing, or *vice versâ*, more than once. The altitudes range from 15 ft. to over 6000 ft. above sea level. We have also hot, dry, stifling, and hot, moist, relaxing winds, with dust storms and fly pests thrown in as a change—in other words, we experience the extremes of heat, cold, draught and moisture and their consequences; still, we are frequently indulged with delightfully cool morning and evening breezes during the hot seasons, with a cool, refreshing shower of rain occasionally. There are some excellent cases of recovery, following actively various callings; but these cases do not include the kind which have arrived during the past year or more—most of the recovered cases I refer to came out at the earliest stage of the disease,—backed up with sufficient means to pilot them over at least the first twelve months without causing anxiety on this score. I learn that some derive most benefit by travelling about in suitable ox waggons, as I have so frequently advocated—this nomadic life is very pleasant when properly conducted—mixed with a little shooting and fishing, and not a bit more expensive than most of our hotels. There is one advantage South Africa possesses as a health resort over most others—i.e., those who recover and elect to become colonists can do so, for, as a rule, suitable employment can be obtained in the neighbourhood where they have derived the most benefit, instead of being obliged to return to the land which may have given birth to their ailment. This appears to me to be a boon which should not be overlooked when advising invalids.—I am, Sirs, yours truly,

S. CARTWRIGHT REED, M.D., F.R.C.P. Edin.

Herschel, Cape Colony, November, 1890.

SECRET REMEDIES.

To the Editors of THE LANCET.

SIRS,—Now that the first excitement over Dr. Koch's fluid has to some extent passed away, I have heard various opinions expressed as to the visits to Berlin by so many leading physicians and surgeons to obtain samples of and use a fluid of whose composition they are still kept ignorant. As a junior practitioner I have to ask if it be wise or even in accordance with the regulations of University degrees and the diplomas of the various Colleges, that British medical men should thus take upon themselves the responsibility of using on their patients a remedy which has certainly proved fatal in a certain number of cases. Why has not Dr. Koch put his discovery on the same footing as all true and great discoveries for the benefit of humanity have been put from the very beginning? Why does he still retain the secret remedy in his own hands, receiving Government grants and making many of his own and our practitioners come dangerously near recommending, if not actually using, a secret remedy which, if associated with the name of a less celebrated man, would most assuredly be openly called a quack one? No doubt the widespread and popular interest has had a great deal to do with the precipitancy; but this should not overcome the good sense of the medical profession. Already in Austria, and also in some parts of Prussia, stringent regulations are being made, which clearly show how rapidly the treatment is turning into the too long list of empirical specialties. No one wishes to depreciate Dr. Koch's work, which only great patience, skill, and perseverance could have overcome; but it will be his own fault if a reaction takes place which will relegate his fluid and treatment to the limbo of empiricism. May not this be avoided by a full and free explanation of the composition of and the *rationale* of the treatment by his fluid, and, if necessary, a complete cessation of its limited distribution to general practitioners in his own or any other country until such time as a sufficient number of cases of indubitable cure or improvement has been reported? Doubtless it may be argued that it is only by extensive trials that trustworthy statistics can be compiled, and rightly so, if all those who use this lymph knew what it is and the *rationale* of its

action. Nothing will bring it more rapidly into disrepute as a legitimate therapeutic agent than the fact that all who have used it, or intend to use it, are kept ignorant of its composition. It follows, therefore, that, until such disclosure be made, Dr. Koch's liquid runs the serious risk of being classed as illegitimate. May I ask if any of the universities or colleges has sanctioned the use of this secret remedy by individual graduates and diplomats, who have had it supplied to them and have used it, and also if they have been guilty of any infringement of their qualification as practitioners? Perhaps the universities and colleges may answer this through the columns of your old-established journal.—I am, Sirs, yours truly,

J. CHRISTIAN SIMPSON, M.B. Edin.

DISINFECTION IN LONDON.

To the Editors of THE LANCET.

SIRS,—In the report of THE LANCET Special Sanitary Commission upon this subject, it is stated that "the district of St. Pancras has built itself a steam pressure stove which is a copy of the stove employed by Mr. Lacy, who formerly did all their disinfecting work." The high pressure steam stove in use in St. Pancras is the Nottingham patent steam disinfector, and was erected by Messrs. Goddard, Massey, and Warner of Nottingham. It came specially under my notice in a paper read in April, 1889, before the Society of Medical Officers of Health by Dr. Tomkins of Leicester. It is constructed on a principle similar to that introduced by Professor G. van Overbeck de Meyer of Utrecht. The Sanitary Committee of the St. Pancras Vestry visited the Fever Hospital at Hornsey and there saw the chamber in practical working. The St. Pancras machine, like each of its predecessors, had suggested improvements of detail introduced during construction. It was erected in the months of September and October, 1889, displacing a hot, dry-air chamber, and came into use concurrently with the Infectious Disease Notification Act. During these two months Mr. Lacy disinfected the bedding, clothing, &c., the parochial officers doing the fumigation &c. The cost of disinfecting the bedding &c. during this period nearly equalled the cost of the new chamber. These are the facts concerning St. Pancras.

I am, Sirs, yours obediently,

JOHN F. J. SYKES,
Medical Officer of Health.

Vestry Hall, Pancras-road, Jan. 6th, 1891.

P.S.—As to the methods pursued in St. Pancras, I beg herewith to enclose you copies of my Annual Report for 1889, and would refer you to pages 18–20.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Workmen's Dwellings in Newcastle.

CANON FRANKLIN, who has given much attention to the housing of the working classes in Newcastle, in a speech in the Central Hall last Saturday gave some of his experiences in this city, which are not a little startling. He stated that there were four miles of underground dwellings in Newcastle, places where the light never came in except filtered through a dark medium, and with dripping walls. Such tenants saw nothing but misery in their houses, and could not afford to live upstairs. He believed houses were dearer in Newcastle than anywhere else. To be near their work men must live in hovels underground, breathing a damp atmosphere, or pay a higher rent than they could afford, and were thus, he believed, often driven into the public-house for comfort. He also mentioned the fact that lately more than 1000 people were driven out of one street to make room for post-office and other extensions. Canon Franklin in this matter has taken up a great and important matter, and it is to be hoped he will continue to direct public attention to it, so as to move our rather inert and dilatory municipal authorities. He has likewise very opportunely shown that a long-wished-for Act of Parliament comes into force this week, which if acted upon must have before long a beneficial effect. It provides that any four ratepayers may sign a requisition calling on the medical officer of health to visit any property they consider unfit for habitation. The medical officer must then visit and report. If he considers the houses unfit for habitation, the corporation is bound to close them, and before closing them it must provide suitable dwellings for the dispossessed tenants. He suggests that a small association of independent citizens might be formed into a vigilance committee to look after the insanitary dwellings of the poor.

Sunderland.

The sanitary state of Sunderland is not at present good, as evidenced by the death-rate of last week—viz., 32·5 per 1000. This, I believe, is the highest rate of the past year, and exceeds the birth-rate. It is to be hoped that this state of things is exceptional, and depends upon the climatic changes we are experiencing in the north now in common with the other parts of England. Mr. T. W. Backhouse has forwarded a cheque for £200 in aid of the building for the Sunderland Eye Infirmary. Mr. Arthur Backhouse has sent a cheque for a similar amount, and £100 has been contributed by the Wearmouth Coal Company. The secretary of the Sunderland Infirmary has also received £500 from Mr. Arthur Backhouse in aid of that institution.

A Consumption Hospital for Newcastle.

Mr. Arthur T. Wear, of this city, and one of the honorary medical officers of the Chest Hospital, has written a letter to the *Newcastle Journal*, pointing out the need for a properly equipped consumption hospital for Newcastle. He cites the death tables, which indicate that in the year 1889 the deaths from consumption in this city, out of a total from all causes of 4033, were 387, and also that the industries of the district and its geographical situation favour consumption and all pulmonary affections. Mr. Wear has done good service in drawing the attention of our citizens to this acknowledged want, which, if once properly taken in hand, could be soon supplied, and the present prosperous times are most opportune. I believe that the working classes of Newcastle—I mean, of course, the artisans—could easily build and support such a hospital, but it will require time and work before they see its necessity.

South Shields.

I regret to notice the death from typhoid fever, after a very brief illness, of Mr. T. M. Hall, the secretary of the Ingham Infirmary at South Shields. Mr. Hall was a son of the late Mr. J. L. Hall, J.P., and at the time of his death was only thirty years of age. He was much respected by the profession at South Shields and deeply regretted by all.

It is reported that there is another extensive outbreak of typhoid fever at Stockton, and that the distribution of the cases points to a common cause.

Newcastle-on-Tyne, Jan. 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS)

EDINBURGH.

Health of Edinburgh during 1890.

THE mortality of Edinburgh last year was 4990, making the death-rate 18·4 per 1000. Of the total deaths, 1880 were under five years, and 1237 above sixty years of age; of these, 243 were above eighty, 26 above ninety, and 1 above a hundred years. Diseases of the chest caused 1660 deaths, and zymotic diseases 695, of which 44 were due to typhoid, 85 to diphtheria, 46 to scarlatina, 241 to measles, 243 to whooping-cough, and 35 to erysipelas. The intimations for the year numbered 6825, and included 6 cases of typhus fever, 500 of typhoid, 361 of diphtheria, 1197 of scarlatina, and 4761 of measles. In the City Hospital 1578 cases had been treated. There were 7177 births registered during the year.

The Edinburgh Public Health Committee and the Koch System.

A little time ago the committee of the Victoria Dispensary made an application to the Public Health Committee to have some beds set aside in the City Hospital for the reception of cases of phthisis to be treated with Koch's liquid. The committee resolved to recommend the magistrates and Town Council to decline to receive such cases. They will certainly have the support of the profession here in this decision.

Edinburgh University Returns for 1890.

During the past year the total number of matriculated

students was 3503, as against 3160 in 1880 and 1768 in 1870. Of the total number, 1979 were in the faculty of medicine; of these, 814 belong to Scotland, 687 to England and Wales, 58 to Ireland, 99 to India, and 270 to various British colonies. In the same faculty 54 candidates received the degree of M.D., and 219 the conjoint degrees of M.B., C.M. The annual value of medical scholarships and bursaries amounts to £2560.

Annual Report of the Edinburgh Royal Infirmary.

The annual meeting of the contributors to the Royal Infirmary was held on Monday, and had submitted to it the annual report. From this report it appears that between October, 1889, and October, 1890, the total number of in-patients was 8695. Of these, 3648 were dismissed cured, 3121 relieved, 685 dismissed on other grounds, while 634 died in the hospital. Of the cases brought to a termination 3619 were medical, and 4478 were surgical cases. The average daily number of patients in the hospital was 645, the greatest number at any one time being 699. The percentage of deaths was 7·0, and, deducting cases which died within forty-eight hours after admission, it was only 5·3. The ordinary income was £31,552 6*s.* 9*d.*, and the expenditure £37,945 15*s.* Legacies and donations of £100 and upwards amounted to £12,993 1*s.* 3*d.* This report completed the first decade of the New Infirmary, and during that time the medical cases had increased by 67 per cent., and the surgical by over 88 per cent. It was further intimated that an increase in the accommodation at the Convalescent Hospital was under consideration and was much needed.

Health of Edinburgh.

The mortality last week was 112, and the death-rate 21 per 1000. Diseases of the chest caused 50 deaths, and zymotic diseases 15, of which 7 were due to typhoid fever and 5 to whooping-cough. The intimations for the week comprised 31 cases of typhoid, 23 of scarlatina, 5 of diphtheria, and 7 of measles.

Illness of Surgeon-General Fasson.

Surgeon-General Fasson, the superintendent of the Royal Infirmary, is so seriously ill that the annual gathering of nurses and other entertainments which take place at this season have been postponed. Last year they experienced a similar disappointment by the illness of the matron.

Edinburgh, Jan. 6th.

ABERDEEN.

Royal Infirmary Hospital Sunday.

The 4th inst. was Hospital Sunday for the Royal Infirmary, and the collections already intimated show that the total amount will at least equal that of last year. An abstract of the number of patients received into and dismissed from the Royal Infirmary was annexed to a letter sent by the directors to the different churches to show that the "institution deserves in fullest measure the support of the public." The abstract shows that on Jan. 1st, 1890, there were 155 patients in the hospital, and that during the year, up to Dec. 21st, 2015 were admitted, 955 were cured, 631 were improved, 269 were dismissed at desire or as unfit, and 148 died. On Dec. 21st there were 167 patients in the hospital. In their special appeal the directors state that the ordinary income will fall considerably short of the expenditure, a circumstance arising almost entirely from additional cost under the heads of medical and surgical requirements, and increased outlay in connexion with laundry work. The church collections for 1890 amounted to £1640.

Health of the City.

The following cases of zymotic diseases were notified last week to the medical officer of health: Measles, 7; scarlet fever, 17; and diphtheria, 1.

Is Cheese Meat?

Last week the sanitary inspector petitioned the magistrates to grant an order to have forty-seven cheeses destroyed which he considered unfit for human food. The agent for the owner of the cheeses objected to the petition being granted because cheese was not included in the section of the Public Health Act under which the petition was made. After an adjournment, the magistrates decided that "the objection was well founded." "The 26th section of the Public Health Act, under which the petition is brought, mentions specifically," they said, "the various articles which, if unfit for human food, may be seized by the sanitary inspector. Amongst these cheese is not mentioned, and although it was maintained that, having regard to and intention of the Act, such an article of food as cheese might fairly be held to be included under the term of 'meat,' we do not see our way to give effect to that contention. We accordingly sustain the objection and dismiss the petition."

Jan. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

The Public Health of Belfast.

MR. CONWAY SCOTT, C.E., the executive sanitary officer for the city of Belfast, has prepared a very interesting and able report on the question of the removal of refuse matter from the dwellings in the city. After pointing out that Belfast has a population of nearly 250,000, with 48,000 dwelling-houses, besides workshops, warerooms, factories, and mills, he shows that at present each house has an ashpit in the yard in which usually more than a ton of refuse matter can be held. When it is full the pit is cleansed and its contents removed on payment of 1*s.* per load. In cases of sickness and poverty no charge is made. The objections to this plan are: First, that the pit is not cleansed until it gets full, and in this way a pollution of the atmosphere takes place in the vicinity of the dwelling; secondly, to save the cost of removal tenants in small houses throw the contents of the ashpit into the adjoining passage, lane, or street (a most objectionable practice); and, thirdly, as the floor of the pit is rarely concreted, liquid matter percolates the subsoil with offensive material. Starting with the maxim that in sanitary matters "prompt filth removal" is of primary importance, Mr. Scott points out what has been done in Rochdale, Edinburgh, and Birmingham, and states that his opinion, after fifteen years' careful study of the subject, is that the system of disposal which he would recommend for Belfast is the railway system, which can be utilised to transfer the filth of a city, from where it is a nuisance and a danger, to the country, where it is a source of prosperity. He recommends that four small experimental districts be formed, and that during next year a daily or weekly removal of filth be carried out in each by the city scavengers, and that the refuse matter be removed to the nearest railway depôt, and thence to the country. (During the past year 10,000 tons of city manure were sent to the farmers in the country by rail, and the demand exceeds the supply.) At the end of the year the sanitary condition of those districts, with their death-rate, can be compared with other parts of Belfast, and the practical details of the system of filth removal best suited to Belfast can be gradually fixed and the cost ascertained.

Officer of Health for Belfast.

I understand that the Local Government Board have approved of the appointment of Dr. Whittaker as medical superintendent officer of health for the city of Belfast.

The Belfast School and the Royal University.

Owing to the death of Dr. Anthony Corley of Dublin, a surgical Fellowship in the Royal University becomes vacant, and for the post Dr. John Walton Browne, senior surgeon to the Royal Hospital and to the Belfast Ophthalmic Hospital, is a candidate. The Belfast students have sent a memorial to the University urging that Dr. Browne should be appointed, on the grounds that, while the Belfast School of Medicine contributes nearly 50 per cent. of the candidates for the M.B. of the Royal University, there is only one examiner from that school at this examination.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Experimental Researches on Cow-pox Vaccination in the Calf.

MM. Straus, Chambon, and Ménard reported to the Académie des Sciences on Dec. 22nd, 1890, the results of the experiments conducted by them for the past two years on the above subject. They find that the inoculation of cow-pox lymph into the cornea provokes, in six or seven

days, keratitis, characterised by opacity of the cornea, intense congestion of the conjunctiva, photophobia, and lacrymation, the operation conferring immunity, but not so rapidly as in subcutaneous inoculation. The same operation practised on a calf previously rendered immune by subcutaneous inoculation leaves the cornea unaffected. Inoculation into the anterior chamber is as surely, and almost as rapidly, protective as the ordinary subdermic operation, a considerable degree of inflammation of the cornea and iris being excited. The intra-venous transfusion of even a feeble quantity of vaccine confers complete immunity without producing either local or general disturbance. The same immunity was conferred on a calf into whose veins the blood of another calf presenting the characteristic eruption of cow-pox at its height had been injected. The weight of blood transfused, however, must not be less than from 4 to 6 kilogrammes. The transfusion of 5½ kilogrammes of the blood of a calf previously protected by vaccination, and weighing 148 kilogrammes, failed to protect an animal of the same species, thus proving the interesting fact that the transfusion of nearly the whole of the blood of a protected animal is inefficacious as a prophylactic measure. Finally, cow-pox vaccine mixed with an equal volume of sterilised bouillon, and then filtered, proved to be worthless as a protective agent.

Therapeusis of Benzo-phenoneid.

M. Galezowski read, on the 27th ult., to the Société de Biologie, a communication on the application in ophthalmology of this new bactericide, discovered by him and M. Petit. They have succeeded in producing, by the decomposition of an aniline dye, a definite compound (tetramethyldiapsido-benzo-phenoid), which they propose to call by the less formidable name of benzo-phenoneid. This product is endowed with the same powerful microbicide properties as pyoktanin, whose chemical composition is unknown. Soluble in 100 parts of water, the solution, further diluted a hundredfold, is neither caustic nor irritant. Applied locally, it has proved very efficacious in causing the rapid and painless cicatrisation of ulcers of the cornea which had resisted all other methods of treatment. It has given also good results in purulent keratitis and chronic phlyctenular ophthalmia.

Deaths of Dr. Baillarger and M. E. Richard.

An eminent alienist, whose name must be familiar to all students of mental medicine, has just been removed by death in the person of M. Baillarger. M. Emile Richard, who died of broncho-pneumonia on the 27th ult., aged forty-seven, was better known as a militant politician than as a practitioner. He occupied at his death the onerous and important post of President of the Paris Municipal Council, and was also the political editor of the daily paper *La Cité*. He recently presented to the body over whose deliberations he presided a somewhat elaborate report, subsequently published in volume form, on prostitution.

Retirement of Paris Hospital Physicians.

The following eminent Médecins des Hôpitaux de Paris, having attained the age of sixty-five—the limit prescribed for compulsory retirement—are this year, with two exceptions, relegated to honorary functions: MM. Charcot, Potain, Mesnet, Vidal, Laboulbène, and Féréol. The exceptions are Professors Charcot and Potain, who, in virtue of their position as clinical professors of the faculty, are exempted from the application of the above rule until they reach the age of seventy. Even then M. Charcot, who adds to his numerous honours that of being a Member of the Institute, will be at liberty to retain his post at the Salpêtrière for a further period of five years—i.e., until 1900. The numerous admirers of this famous pioneer in the scientific study of diseases of the nervous system will rejoice to learn that the regulation affecting less known colleagues will not, for some considerable time, debar him from continuing the researches which have shed such lustre both on himself and on the school of neurology, the creation of which is largely due to his genius and initiative.

Koch's Liquid.

Your readers will have gathered from these pages that French physicians find it difficult to become reconciled to the secrecy observed concerning the composition of Koch's liquid. M. Léon Petit (Soc. de Méd. Pratique, Dec. 18th, 1890) formulates an opinion that the appearance of the liquid as a therapeutic agent has been premature, and he considers that its employment should, for the present, be confined to the laboratory. Assisted by MM. Cérémonie and Gautrelet, he has subjected Koch's fluid to analysis and found that the active principle is an amine. These observers have succeeded in reconstituting, synthetically, a substance—christened patriotically by them *la lymphe Française*—which presents the same organoleptic, physical, and chemical properties as the German liquid. The composition of this indigenous product will be divulged as soon as the results of inoculatory experiments now proceeding on sound and tuberculous animals of divers species have been verified.

Animal v. *Human Lymph.*

In reply to the question propounded by the Board of Health of the Department of the Seine by the Prefect of that territorial division as to the advisability of substituting animal for human lymph in vaccination, Dr. Lancereaux, specially deputed to report on the subject, pronounces decidedly in favour of the animal product, and recommends the discontinuance of human lymph. The reasons adduced in support of this conclusion are the immunity from risks of communicating syphilis, erysipelas, lymphangitis, &c., and the greater facility of procuring the calf lymph in a pure state, the source being picked animals placed under the most favourable hygienic conditions. M. Lancereaux attributes to the general employment of calf lymph the increasing favour with which the practice of vaccination, and especially revaccination, is regarded in France.

Paris, Jan. 6th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Ferdinand Cohn and Robert Koch.

AT a time when all the world is talking or has just been talking about Robert Koch, the following word portrait of him by a distinguished man of science who has known him for many years is likely to interest many. It is from the January number of the *Deutsche Revue*, and its author is the famous botanist, Professor Ferdinand Cohn, of Breslau. "When I made Koch's acquaintance," he writes, "he was already the great investigator whom all the world now knows and admires. On the 22nd of April, 1875, I received a letter from the district physician, Dr. Robert Koch, of Wollstein, in the district of Bomst, in the grand-duchy of Posen, asking whether I would allow him to visit me in Breslau, and perform before my eyes the chief experiments relating to anthrax and its characteristic bacilli, the history of the development of which he believed he had now discovered after prolonged investigations, and with it the etiology of that destructive disease. I had been myself engaged for years past with bacteriological investigations, and had consequently often received announcements from dilettanti of their alleged discoveries in that field, which was then being cultivated with but little precision; the expectations, therefore, which that letter from an utterly unknown physician in a Polish country town inspired in me, were of the smallest. I of course wrote, however, that I should be very glad if Herr Koch would visit me and show me his things ("seine Sachen"). Koch came to my institute on April 30th, and I can truly boast that in the first hour of our intercourse I recognised in him an unequalled master of scientific investigation; his method, proceeding with rigid consistency from step to step, the elegance and certainty of his experiments, the classic clearness of his statements, were all as perfect in his first, then just completed, work on anthrax as in all his later researches. For Koch's works are distinguished from those of most investigators by the circumstance that he does not publish them till they are finished to the last point. Others cart up stones to be used in the building up of science, or draw a new plan or add a new wing, a new storey, a new roof, but they finish only the brickwork, and leave it to others to complete the building and make it habitable. Koch, on the other hand, does not let his scientific fabrics leave his hands till he has made them completely fit in all their details as well as in the main for the use of others, who have then nothing more to do than to add this or the other little furnishing. All Koch's works have been so complete in form and contents that nothing remained for those that followed but to confirm them, for it was not possible to add

anything essential. Such were the first work of 1875 on anthrax, that on wound infection, the numerous treatises in the communications of the Imperial Office of Health, the magnificent researches on the tubercle and cholera bacilli, and such beyond doubt his latest discovery will prove. On his first visit in May, 1875, Koch stayed only a short time in Breslau, and I availed myself of the opportunity to make my Breslau colleagues personally acquainted with him and his researches. I then remained for years in occasional correspondence with him. His letters generally filled several sheets. He repeated his visits to Breslau too; and when the place of a medical expert in the law-courts there fell vacant in the summer of 1879, we succeeded in getting him appointed to it, with the prospect of an extraordinary professorship in the University. But already in January, 1879, the medical faculty of the University of Berlin had of its own accord proposed to the Minister Koch's appointment to an extraordinary professorship, and the establishment of an institute for him. Some papers say that Koch wished to establish himself as a private lecturer in Breslau, but was refused permission. That is utterly untrue. The proposal of the Breslau faculty had been made without Koch's knowledge. His work as a medical expert in the law courts could not satisfy him either scientifically or pecuniarily, and he returned after a few months to Wollstein, where his place as district physician had been kept open for him. That he did not remain there long, but was called to the newly founded Imperial Office of Health in Berlin in 1880, did great honour to the German Government, and was of great advantage to science—nay, to all mankind. But if you ask me for reminiscences of conversation with Koch, I can only say that in personal intercourse Koch makes the same overpowering impression as in his writings by the clearness, depth, and novelty of his thoughts, only that this impression is greatly enhanced by the simplicity and amiability of his manners, the look of his deep-set eyes, his fine smile, and the euphony of his voice. In conversation with Koch one is often positively dazzled by occasional remarks or short questions, indicating still unknown researches that he has been working at for years, and revealing new scientific horizons. But of details of the conversations which I and my then assistant, Dr. Eidam, had with Koch, and which sometimes lasted deep into the night, I have no remembrance."

Professor Martius.

Dr. Friedrich Martius, private lecturer in the University of Berlin, has been summoned to Rostock as an extraordinary professor. Dr. Martius studied in Berlin, and graduated here in 1874 with a treatise "on prophylactic tracheotomy in the field." After his graduation he served as a surgeon in the army. In the beginning of the eighties he came as staff-surgeon to the Friedrich Wilhelm Institute here for the training of army surgeons, and was at the same time appointed one of the Charité physicians. He was also for some time assistant in Professor Gerhardt's clinic. His last post was that of a physician in the railway regiment. Dr. Martius' scientific studies have been directed mainly to diseases of the nerves and of the heart. He has made discoveries concerning the motion of the heart and heart beat by means of the so-called "marking method" devised by him. His writings on tetanus, tabes dorsalis, electric diagnosis, and the direction of the fibres in the central nervous system are of special importance. He is in his forty-first year.

Berlin, Jan. 6th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Chemical Analysis of Koch's Liquid.

A SECOND chemical examination of Koch's remedy has been carried out here at a private laboratory. The results obtained by the first analysis, and reported to THE LANCET some weeks ago, have been confirmed thereby. It may only be added that the liquid was found to contain 50·11 per cent. of water. When the liquid is treated with nitric acid at ordinary temperature no change is to be observed, but if boiled with nitric acid a light greenish-yellow colour appears, and by adding a few drops of ammonia this solution assumes a beautiful golden-yellow colour, which, spectroscopically examined, then exhibits an absorption band between *b* and F (at the limit of the green and violet field), while the original solution of the lymph, when treated with ammonia alone, does not yield such a reaction. When Koch's lymph is treated with an aqueous solution of tannic acid the albumins are perfectly precipitated. The white, voluminous precipitate formed in this way is perfectly soluble in hot water, and precipitates again by cooling. It dissolves also in a solution of common salt. When the precipitate obtained by tannic acid is treated with a few drops of diluted potassic hydrate it disappears, and the solution thus formed assumes a yellowish-brown colour, which becomes gradually reddish-brown by the contact with air. This brown solution, examined spectroscopically, exhibits also an absorption band between *b* and F, which is extremely similar to the spectrum of urobilin. By elementary analysis the quantity of carbon was determined to be 35·19 per cent., the quantity of water 7·02 per cent., and the nitrogen, determined by Dumas' method, amounted to 5·90 per cent. The quantity of the lymph being too small, it was impossible to separate the different albumins, but the chemists believe that the active principle belongs to the class of toxalbumins.

Koch's Treatment.

The progress of the cases of lupus towards recovery recorded in my former letters to THE LANCET was observed also during the last week here. At Schroetter's clinic the cases of tuberculous laryngeal affections which have been treated by Koch's lymph for some weeks have shown no sign of any improvement, and in one of them tracheotomy had to be performed on account of the severity of the reaction. In the majority of the cases of pulmonary phthisis I have seen here under treatment, a considerable loss of bodily weight, amounting even to four kilogrammes in the course of two weeks and a half, could be stated. My attention has also been drawn to the fact that, besides the other changes produced in the tuberculous tissues by the injections, the frequent occurrence of some micro-organisms has been observed, the nature of which is to be studied here now, as they are said to differ from the other micro-organisms observed in inflammatory processes and from the tubercle bacillus. According to a communication made before the Prague Medical Society by Professor Chiari, who made the post-mortem examination of three cases treated by the lymph, the pathological changes produced by the injections consist chiefly of hyperæmia, with hæmorrhages, leucocytic infiltration, and fibrinous exudation. A peculiar distribution of the tubercle bacilli has also been observed by Professor Chiari, as the bacilli were to be found in greater abundance in the lumen of the bronchi in the cases of pulmonary phthisis and on the bases of the ulcers in the cases of intestinal tuberculosis.

Vienna, Jan. 5th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Execution by Electricity.

THE report of Dr. MacDonald, a State Commissioner, on the execution of William Kemmler by electricity is the first authentic and full official account of that transaction which has been given to the public. From this report it is shown that the apparatus consisted of a stationary engine, an alternating current dynamo and excitor, a Carder's voltmeter, with extra resistance coil, calibrated for a range of from 30 to 2000 volts; an ammeter for alternating currents from 0·10 to 3·00 amperes, a Wheatstone bridge, rheostat, bell signals, and necessary switches; a death chair, with adjustable head-rest, binding straps, and two adjustable electrodes. The instant the circuit was closed the body was thrown into a state of marked rigidity, every fibre of the entire muscular system being apparently in that fixed, rigid condition resembling tonic spasm; motion and consciousness were absolutely suspended, and remained so while electrical contact continued. At the end of seventeen seconds Kemmler was pronounced dead and the circuit was broken. The condition of rigidity instantly ceased, and was succeeded by complete muscular relaxation. Superficial discolourations resembling post-mortem changes appeared on the surface of exposed portions of the body, especially the face. The body remained motionless and apparently lifeless for half a minute, when there was a series of slight spasmodic movements of the chest, with the flow of mucus from the mouth. Though there was no

evidence of a return of consciousness or sensation, yet, lest life was not wholly extinct beyond resuscitation, the current was reapplied and continued seventy seconds, when smoke was seen to issue from the spinal electrode, due to scorching of the edge of the sponge, from which the moisture had been evaporated; there was also some burning of the body under the electrodes. The necropsy, made in three hours, exhibited few important changes. The burned integument on the back showed the spinal muscles underneath to be cooked like overdone beef throughout their entire thickness. The commissioner regards this method of execution as a complete success, and advises certain modifications of the law in order to perfect the system. Public opinion, however, is by no means so decidedly in favour of the new method. On the contrary, the shock which the first accounts of the execution gave still influences the masses, and it will require many really successful executions by this means to create a favourable public sentiment.

Death of the Surgeon-General.

The sudden death of Surgeon-General Baxter removes from official circles at Washington a man who has for many years been one of the most prominent candidates for that office. For a quarter of a century he has aspired to that position, and on several occasions the coveted prize has seemed within his grasp, when by some singular chance it has eluded him. Once he saw his nomination made out in the Executive Office, and he thereupon went to the Senate to receive the congratulations of his numerous senatorial friends. But when the nomination was announced he was amazed to find that he had been superseded. At length success crowned his efforts, and a few months since he received the appointment. He expressed himself as intensely gratified, having attained the object of his life-long ambition. He had scarcely composed himself in his official chair when he was stricken with cerebral hæmorrhage, and died after three days' illness. Dr. Baxter was a man of indomitable energy and perseverance, and won praise from his superiors in whatever position he was placed. His death gives rise to the usual scramble of candidates for the office, and it is impossible to predict who will win the nomination.

Koch's Remedy.

The profession and public are just now greatly excited over the trials of Koch's liquid at the several hospitals. There has been much rivalry in obtaining the first supply of the liquid, but a neighbouring city, New Haven, proved to be the successful applicant. Several packages have now been received in this city, and the practice is being carried out with great skill and care in four or five hospitals. The results thus far are the same as have been reported from Berlin. In due time full reports will be made by the several operators.

Bone Transplantation.

A novel method of transplanting bone is in progress in the Charity Hospital. The patient is a boy who has lost by necrosis a certain portion of a long bone. To supply the deficiency a dog has been encased in a plaster-of-Paris dressing, except his head and urinary and faecal outlets; a dissection of one leg has been made so as to expose the bone, the foot has been amputated, and the bone placed in the already prepared vacant space in the boy's limb, the dog lying by his side. The progress of the case is said to be favourable.

New York, Dec. 16th.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS. — Surgeon James Mackay, 6th (Fifeshire) Volunteer Battalion, the Black Watch (Royal Highlanders), to be Surgeon, ranking as Captain (dated Jan. 7th, 1891).

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Staff Surgeon Edward Ferguson to the *Forward* (dated Sept. 30th, 1890). Surgeons: George Edwards to the *Duke of Wellington*, additional; Richard F. Bate to the *Pembroke*, additional; H. W. Finlayson to the *Britannia*, for temporary service; Richd. C. Munday to the *Impregnable*, additional; Edwd. C. Cridland, Frank Bradshaw, and Mathew J. O'Regan to the *Vivid*, additional (all dated Jan. 6th, 1891); and Edwd. T. Cook to the *Speedwell* (dated Jan. 2nd, 1891).

VOLUNTEER CORPS. — *Artillery:* 3rd Kent (Royal Arsenal): Surgeon S. Davies, M.B., from the Volunteer Medical Staff Corps (Woolwich Division), to be Acting Surgeon (dated Jan. 7th, 1891).—1st Forfarshire: John Frederick Sturrock, M.B., to be Acting Surgeon (dated Jan. 7th, 1891). — 1st Essex (Eastern Division, Royal Artillery): Surgeon-Major (ranking as Lieutenant-Colonel) J. B. Kennedy resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Jan. 3rd, 1891).—9th Lancashire: Acting Surgeon A. Jones to be Acting Surgeon (dated Jan. 1st, 1891), and will be considered to have received a commission of the same rank and date as that previously held by him in the 3rd Lancashire Artillery Volunteers.—19th Middlesex: Acting Surgeon W. C. Adams resigns his appointment (dated Jan. 7th, 1891).—2nd Volunteer Battalion, the Gloucestershire Regiment: William More Hope, Gent., to be Acting Surgeon, (dated Jan. 7th, 1891).—1st Surrey (South London): Acting Surgeon S. G. Milner retires on account of ill-health (dated Jan. 7th, 1891).—1st Cadet Battalion, the King's (Liverpool Regiment): William Evans, Gent., to be Acting Surgeon (dated Jan. 7th, 1891).—*Infantry:* Dover Brigade: Surgeon and Surgeon-Major C. F. Lewis, 2nd Volunteer Battalion, the Royal Sussex Regiment, to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated Jan. 7th, 1891). Harwich Brigade: Surgeon and Surgeon-Major G. S. Elliston, 1st Volunteer Battalion, the Suffolk Regiment, to be Brigade Surgeon, ranking as Lieutenant-Colonel, (dated Jan. 7th, 1891). — *Royal Engineers* (Submarine Miners): The Mersey Division: Richard Williams, Gent., to be Acting Surgeon (dated Jan. 3rd, 1891).—1st Lanarkshire: Fredk. Vasey Adams, Gent., to be Acting Surgeon (dated Jan. 3rd, 1891). — 2nd Volunteer Battalion, the Gloucestershire Regiment: Acting Surgeon A. F. Turner resigns his appointment (dated Jan. 3rd, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—The Maidstone Division: Charles Pye Oliver, M.B., to be Acting Surgeon (dated Jan. 3rd, 1891).

Obituary.

JOHN MARSHALL, F.R.S., F.R.C.S., LL.D., M.D., &c.

BY the death of Professor Marshall we have lost one of the ablest of British surgeons, one of our keenest scientific intellects, and one who stood high as a medical politician. John Marshall was born seventy-two years ago in the small cathedral city of Ely, where his father, William Marshall, was in practice as a solicitor. He and his two brothers were all of them men of mark in their respective professions. The eldest, William, succeeded to his father's practice, and also served as coroner of Ely. He was a man of very remarkable ability, but in the quiet sphere in which his life was passed lacked opportunity to display it to the full. He was an admirable naturalist, and, in particular, we may mention that he it was who first traced out the life history of the American pond weed, which suddenly made its appearance in this country and blocked up ponds, canals, and rivers; and he showed that it had been introduced into our waters from across the Atlantic. The youngest brother, Charles, also a very clever man, was for many years vicar of Harpurhey, near Manchester. John was sent to school at Hingham in Norfolk, and subsequently was apprenticed to Dr. Wales of Wisbech. In connexion with this, it is of interest to note that Mr. Marshall's recollection of these apprenticeship days was not such as to induce him to support the movement to reintroduce the system. From Wisbech he came up to University College, London, when about twenty-one years of age, and passed through his classes there with considerable distinction. In the hospital he served as house surgeon to Liston and subsequently acted as his private assistant. On leaving the hospital he started in practice at 8, Crescent-place, Mornington-crescent, as a general practitioner, and while there was appointed assistant surgeon to University College Hospital. Subsequently he moved to George-street, Hanover-square, and then to Savile-row, where he lived until he quite recently retired to Cheyne-walk, Chelsea. He married in 1855, and leaves a widow, two daughters, and a son.

Mr. Marshall was always a very busy man, and his activities extended over a remarkably wide range—literary, scientific, and educational—and a brief notice of the many directions in which his energies found an outlet will be the best testi-

mony both to his brilliant powers and the great use he made of them. In University College he was curator of the Anatomical Museum for three years, demonstrator of anatomy for two years, demonstrator of practical surgery for eight years, holding the first class of the kind in London; then demonstrator of operative surgery, and finally, professor of surgery for sixteen years. In the hospital he served as assistant surgeon for fifteen years, was then surgeon, and finally consulting surgeon. His appointment on the surgical staff was strongly urged by Dr. Sharpey, with whom he was a great favourite. He was also surgeon, and then consulting surgeon, to the Hospital for Consumption, Brompton.

Mr. Marshall was an excellent anatomist and had great aptitude for teaching anatomy, and throughout his professional life took the keenest interest in this subject. He took part in the preparation of the early editions of Quain's Anatomy, for twenty years he was lecturer on anatomy as applied to art in the Government schools, first at Marlborough House, then at South Kensington, and in this class he showed that it was practicable to lecture on this subject to mixed classes of men and women without giving offence. He was also professor of anatomy in the Royal Academy of Arts for the last sixteen years, and here he instituted the practice in the Academy of admitting lady students to the lectures. His energy was characteristically shown by his doubling the number of lectures in this course. Physiology claimed almost as large a share of his time and interest as anatomy. For four years he was Fullerian Professor of Physiology at the Royal Institution, and for two years he lectured on physiology to ladies and lady teachers at University College; this, again, was the first course of the kind given in London. In 1867 he published the "Outlines of Physiology, Human and Comparative." This is now out of print, but, although an excellent text-book, was not so popular as to justify the issue of a further edition. To assist his work among art students he prepared and published life-size diagrams, ten in the physiological series, and seven in the anatomical. These have been very popular; their accuracy and completeness leave nothing to be desired, and show the care with which they were designed. He also published "Anatomy for Artists," and a paper on "Proportions of the Human Body.' At the College of Surgeons Mr. Marshall had a long career of usefulness. He obtained the Fellowship in 1845. He was a member of the Board of Examiners in Anatomy for seven years, and of the Court of Examiners in Surgery for another seven years, and on his resignation of the chair of surgery he was appointed Emeritus professor. He was three times elected a member of the Council of the College, and served the office of President of the College in 1883. He it was who introduced and established an examination at the end of the first year of the medical student's curriculum. He also took a leading part in bringing about the Conjoint Scheme of Examinations by the College of Physicians and the College of Surgeons, and he championed this scheme at the General Medical Council. He moreover devoted a good deal of attention to the finances of the College of Surgeons and rendered great assistance in this way; indeed, it was largely owing to his efforts that the cost of the diploma was reduced. He was one of the Committee of Management of the Conjoint Examining Board of London, and for a time was its chairman.

At the University of London he was Examiner in Surgery for three years; he took a leading part in the movement to found a teaching university for London, and was chairman of the Executive Committee of the Association appointed for this end. Twice he served on the Council of the Royal Society. He was President of the Royal Medical and Chirurgical Society for two years, and in this position rendered most valuable services by reviving the Society and infusing new life into it. For eight years Mr. Marshall was the representative of the College of Surgeons on the General Medical Council, and the best evidence of the great value of the services he rendered there is that when Sir H. Acland resigned the presidency of this body Mr. Marshall was at once chosen to succeed him. The Council was remarkably unanimous in the election of Mr. Marshall. This was on May 10th, 1887. The term of election was five years. The choice of the Council was fully vindicated, for Mr. Marshall discharged the duties in a way to uphold the honour of the chair, which had previously been filled by Sir Benjamin Brodie, Mr. Joseph Henry Green, Sir George Burrows, Sir George (then Dr.) Paget, and Sir Henry Acland. His impartiality was never questioned, his courtesy never failed, and his administrative faculty was great. His own associations were with the corporations of the profession, but the direct representatives will gladly testify that he welcomed them as cordially and as courteously as the representatives of the most ancient institutions. His addresses to the Council at the beginning of sessions were always clear and helpful to the members, and he showed an interest in each subject of debate that was remarkable. His unexpected death will nowhere be more regretted than in the Medical Council, and it will not be easy to fill his place.

Foremost amongst Marshall's scientific writings must be named his paper in the Philosophical Transactions, on the "Development of the Great Veins, including an account of the remains of the primitive vessels and of a 'vestigial fold' not previously described." This was the outcome of entirely original work, and was an admirable study in embryology and morphology. Equally valuable was his paper on the "Brain of a Bushwoman and on Two Idiot Brains." In the former part of this paper he mapped out the convolutions of the brain, and was a pioneer in that field of research which has yielded such a rich harvest in cerebral localisation. His descriptions of the idiot brains are some of the very best extant.

In his Bradshaw lecture on Nerve-stretching he attempted to elucidate the *rationale* of this mode of treatment, and it was in connexion with this, and as a result of investigations undertaken at his instigation, that Mr. Horsley discovered the nervi nervorum. In his Morton lecture on Cancer in 1889 he suggested that the cause of cancer might lie in a loss of nervous control over cell growth. His Hunterian oration at the College of Surgeons was a very eloquent tribute in honour of the founder of the great museum. He was the first in this country to suggest and apply the galvanic cautery in surgery; he also introduced the operation of excision of varicose veins, and drew attention to the value of the oleates as external applications. Turning now to quite another class of study, it is interesting to recall the fact that he it was who, in a joint report with the Rev. Mr. Whitehead on the outbreak of cholera in Broad-street, St. James's, in 1854, showed the influence of water in diffusing disease. Whether we regard the mere intrinsic value of this report—the care with which it was prepared and the soundness of the conclusions drawn—or the great importance of the fact it first revealed, we must regard this as a truly splendid piece of work. At this time (1854) Mr. Marshall also contributed to a report of the College of Physicians a letter on the microscopical appearances of cholera evacuations, and the appearances he describes are of especial interest in connexion with Koch's discovery of the comma bacillus.

The construction of hospitals was a matter in which Mr. Marshall took great interest, and he suggested the construction of circular wards. He advocated his views with great ingenuity and zeal, and they have been adopted in several instances—viz, at Greenwich, Hampstead, Burnley, Hastings, Liverpool, and the Central Northern Hospital, London. The results have gone far to justify the hopes expressed by Mr. Marshall, and there can be no doubt that his suggestion is one of value.

Such is a brief outline of Mr. Marshall's public work; but it leaves much to be said of the man himself. When only a student at University College he was distinguished for "a remarkable clearness of perception and a grasp of mind, and steady, persevering industry," and his mind was well stored by extensive reading, not only in matters directly connected with his profession, but in general literature, and especially in subjects connected with art, history, and points of antiquarian interest. His contemporaries speak of him as modest and retiring, and "in tone, manner, and conversation he was the perfect gentleman." These characteristics remained with him to the last. He possessed a keen scientific intellect, that took a special delight in tracing effects to their causes; and with this he combined a wide range of view, so that every fresh problem was studied from many sides, and regarded in a broad and independent spirit. This habit of mind and his sagacious insight made him a tower of strength on a committee.

But his grasp of details was as striking as his scientific insight, and when we can add that with these he combined great industry, it is clear that in him was the stuff of which the great men of science are made. He had a great power of work, his days were to the last always full, and certainly it was true of him that whatever his hands found to do he

did with his might. As a surgeon his chief characteristic was that he was scientific, and that too at a time when the claims of surgery to rank as a science were far less established than they are to-day. His practice was founded on a minute knowledge of anatomy and sound physiology, backed up by a thorough acquaintance with pathology. Without brilliancy as an operator, he was, what is better, successful, and when required was bold, even to daring. Ever on the alert to improve surgical therapeutics, he welcomed the early development of the antiseptic treatment, the scientific basis of which made it specially attractive to him. He at once put it into practice, and, at a time when the majority of London surgeons were throwing doubts on the antiseptic system, Mr. Marshall was painstakingly investigating the subject and carefully testing it, and he was one of the first in London cordially to support Mr. Lister's views. It is right to mention also that he exhibited unfailing courtesy to his house surgeons and dressers, and to all the students of the hospital; while his kindness and gentleness to his patients were no less marked. As a lecturer he excelled by his enthusiasm, by his faculty of clear description, and by his tact in arranging and in limiting his discourses. It was, perhaps, in his lectures on anatomy that he specially shone, and he took the keenest delight in extending a knowledge of anatomy to artists and others outside the profession. Of his work at the Royal Academy Sir F. Leighton says: "I cannot tell you more than you already know of his great abilities as a lecturer, of his firm grasp of facts, of his facile gift of luminous exposition, of his power of kindling in others the interest he felt himself in the fascinating study of anatomy. I can only, therefore, say that his general kindness and unfailing zeal, even under bodily difficulties, drew our students to him, and that in his loss they regret a valued friend as well as a stimulating teacher." His appointment at the Academy was a peculiarly happy one, for he was profoundly penetrated with a love of art and of everything beautiful, and from early life was a discriminating art critic. His work at the College of Surgeons and on the General Medical Council shows him to have been gifted with admirable business faculties, and to have been one who brought to the questions of medical politics the same scientific insight (and foresight), earnestness of purpose, industry, and singleness of aim that animated him in other branches of his work. For ourselves, we feel especially indebted to Mr. Marshall for his services in connexion with the establishment of THE LANCET Relief Fund. When the question was first mooted, he at once said that he personally would do all he could to carry out our views, that he would propose at the General Medical Council that its members should consent to their President becoming one of the Almoners of the Fund, and we know with what care and anxiety he performed the duties connected with the post of Almoner.

His old pupils will not need to be reminded of his striking face, and especially of his keen dark-brown eyes of remarkable lustre, which once seen were not likely ever to be forgotten. Quite lately advancing age and his many labours left their mark in a slight stoop and a slower step; but it is pleasant to know that to the end of life he possessed all his faculties unimpaired, and that his interest in life and keen industry were never for a moment slackened. His fatal illness—bronchitis with albuminuria—lasted but a few days. He was buried at Ely on Tuesday last. On closing this imperfect and unworthy notice of Mr. Marshall we must again pay a tribute of affection and honour to so kind a man, so true a friend, so keen a thinker, so accurate and industrious an observer, so enthusiastic and cultured a teacher. His work was great and will be permanent, and if we cannot all rival him in his brilliant powers and noble use of them, we can honour and cherish his memory and find in it an inspiration.

ROBERT GEE, M.D. HEID., M.R.C.P. LOND, OF LIVERPOOL.

THE deceased, who was in his seventy-second year, was a native of Denbigh, and received his medical education in University College, London, Edinburgh, Paris, and Heidelberg. He settled down in Liverpool rather more than forty years ago, having graduated and obtained the old double qualification of M.R.C.S. Eng. and L.S.A. in 1842. Subsequently in 1859 he became a Member of the Royal College of Physicians of London. He became one of the resident surgeons of the Liverpool Workhouse soon after going to Liverpool, and his connexion with that institution continued until severed by his death, he becoming visiting physician and consulting physician, which office he held to the last. He was also consulting physician to the Hospital for Infectious Diseases and to the Hospital for Consumption and Diseases of the Chest. For many years he was connected with the school of medicine as lecturer on pathology and diseases of children, and enjoyed a considerable private practice. Dr. Gee was always extremely popular, both with his professional brethren and the public, and on the death in 1867 of Mr. Philip Finch Curry, then coroner for the city, a meeting was held in the medical institution to promote his candidature for the vacant office, which, however, was not successful. Some years ago he was appointed a Justice of the Peace for the city, and took his place on the bench regularly when his turn came. By his connexion with the workhouse, which is one of the largest in the kingdom, the deceased had experience of epidemics of cholera, typhus, relapsing fever, scarlatina, diphtheria, and measles. His contributions to medical literature were not very numerous, but he enjoyed a fair share of consulting practice in those diseases of which he had so large an experience. He was a prominent figure among the Calvinist Methodists, of which body he was a member and, later on, a deacon. He took also a prominent part in politics, having been for eighteen years the Liberal chairman for Abercromby Ward. On his retirement from that position Mrs. Gee was presented with her husband's portrait painted by Mr. R. E. Morrison. Dr. Gee possessed a very kind, genial manner, and his loss will be much felt. His funeral took place at Oswestry Cemetery on the 5th inst., in the presence of a large number of relatives and friends. Appropriate references to the deceased were made at the Police-court, Liverpool, by Mr. Raffles, the stipendiary magistrate, and by Mr. Clarke Aspinall, the coroner. On Sunday the chaplain of the workhouse, the Rev. E. Smith, alluded in touching and appropriate language to one who had been for so many years professionally connected with the institution.

ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Council, held on the 8th inst., the minutes of the Ordinary Council on Dec. 11th were read and confirmed.

The Secretary reported the death, on the 1st inst., of Mr. John Marshall, F.R.S., past President, Member of Council, and Member of the Court of Examiners of the College, and Representative of the College on the General Medical Council, and a vote of condolence with Mrs. Marshall and family was unanimously passed. The President stated that the office of Representative of the College on the General Medical Council would be filled up at a future meeting of the Council, of which due notice would be given.

The minutes of the Museum Committee on the 2nd inst. were read as the report from that committee.

The minutes of the Library Committee on the 5th inst., as the report from that committee, were read, and it was agreed that, as recommended by the committee, the library in future be open to readers on each week-day, except Saturday, between the hours of 11 A.M. and 7 P.M. during ten months of the year, but that during August the library be closed at 6 P.M., and be closed as usual during September.

The President reported on behalf of himself and the vice-presidents that the Bradshaw Lecture had been duly and properly delivered by Sir T. Spencer Wells, Bart., and the best thanks of the Council were given to him for his lecture, and he was requested to publish the same.

A letter of the 11th ult. from the Honorary Secretaries of the International Congress of Hygiene and Demography was read, stating that the Congress will open on Aug. 10th in London, and expressing the hope that the Council would make a contribution to the funds of the Congress. To this the Council replied that there were no funds at the disposal of the Council for such purpose.

A letter of the 12th ult., from Mr. W. O. Reader, was read, requesting the Council to make a subscription towards defraying the expenses incurred by his Committee in opposing the Betterment Clauses of the Strand Improvement Bill, and the Council voted the sum of £10 towards the expenses.

A letter was read from the honorary surgical secretary of the Medical Society of London, requesting by direction of the Council of that Society that the Council of the College would consent to nominate the president of the College for the time being to serve on a committee of seven Members for the adjudication of the Fothergillian Medal and Prize. To this the Council replied that they regretted their inability to do so.

Permission was given to Dr. Anderson Stuart, who applied on behalf of the University of Sydney, N.S.W., to have casts taken of the busts of Sir Astley Cooper and John Abernethy on the usual conditions.

A letter was read from Dr. R. R. Rentoul requesting the Council to petition the Government against the Midwives' Registration Bill. This letter was referred to the Presidents and Vice-Presidents for their consideration.

It was moved by Sir W. Savory, on behalf of Mr. Hulke, and seconded by Mr. B. Hill: "That it is desirable that the present form of report presented to the Fellows and Members of the College be modified, and that a committee be appointed to consider what, if any, modifications appear desirable, and to report upon these or any other matters connected with the report." A committee, consisting of Sir W. Savory and Messrs. Hulke and Hill, was appointed to consider the subject.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent B S (Honours) Examination:—

First Class.—Edward Victor Hugo (Gold Medal), St. Bartholomew's Hospital; W. H. Evans, M.D., B.Sc., University College.

Second Class.—Thomas James Dyall, St. Bartholomew's Hospital, and Arnold William W. Lea, Owens College and Manchester Royal Infirmary (equal); Frederick William Hall, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—The following candidates, who presented themselves at the Third Examination for Medical and Surgical degrees, were approved:—

Part I.—Ds. Abram, Cai.; Ds. Addison, Cai.; Ds. Anderson, Cai.; Ds. Bindloss, Joh.; Ds. G. Calthrop, Cai.; Ds. Carling, Joh.; Carling; Ds. Craig, Cai.; Ds. Crosby, Cai.; Ds. Crump, Emman.; Ds. Dorman, Clare; Mag. Dumbleton, Pet.; Ds. Eccles, Down.; Ds. Felce, Jesus; Ds. Fisher, Cai.; Ds. Fisher, H. Cav.; Ds. Fooks, Jesus; Ds. A. H. Godson, Joh.; Ds. Gornall, Cath.; W. Hawker, Trin. H; Ds. Haydon, Cai.; Ds. Horne, Clare; Ds. Hulbert, Trin.; Ds. Kellock, Emman.; Ds. Latter, Pemb.; Ds. R. Langdon-Down, Trin.; Ds. S. Lewis, Joh.; Ds. Pridham, Cai.; Ds. Roberts, H. Cav.; Ds. Rowland, Cai.; Mag. Samways, Joh.; Ds. Savory, H. Cav.; Shaw, Jesus; Ds. Surridge, Cai.; Mag. A. H. Thompson, Trin.; Ds. Turner, Trin.; Ds. G. Wilkinson (jun.), Emman.; Ds. Wood, Christ's; Wrench, H. Cav.

Part II.—Ds. Batten, Trin.; Ds. Belben, Christ's; Ds. Blaker, H. Cav.; Buss, Sid.; Mag. Connolly, Cai.; Ds. Cordeux, Cai.; Ds. Fosbery; Ds. Gillett, Sid.; Ds. Grabham, Joh.; Ds. Greaves, Cai.; Mag. W. S. Griffith, Trin. H.; Ds. Hale, King's; Ds. Hardwicke; Ds. S. N. Harrison, Trin.; Ds. Haydon, Cai.; Ds. Kellett, Joh.; Ds. Kellock, Emman.; Ds. Knox, H. Cav.; Ds. C. H. Leaf, Trin.; Ds. Martley, Trin.; Ds. Metcalfe, Trin.; Ds. Miller, Queens'; Ds. E. J. D. Mitchell, Cai.; Molson, Emman.; Ds. Molteno, Clare; Ds. Newman, Cai.; Mag. Panting, King's; Ds. E. S. Peck, Christ's; Pinder, Queens'; Ds. Pope, H. Cav.; Ds. Rolfe, Clare; Mag. Samways, Joh.; Ds. W. W. Simmons, Joh.; Ds. H. E. Smith, Cai.; Ds. Sutton, Clare; Ds. Thomas, Jesus; Ds. Usher, Cai.; Ds. Waggett, Pemb.; Ds. Wellford, Trin.; Mag. C. P. White, Clare; Ds. G. Wilkinson (jun.), Emman.; Ds. W. Winslow, Cai.; Ds. Wright, Joh.; Mag. Wyman, Trin.

MEDICAL MAGISTRATES.—The names of Mr. H. Dobie, M.B. Edin., M.R.C.S., and Henry Stolterfoth, M.A. Cantab., M.D. Edin., have been added to the Commission of the Peace for the city of Chester.

BRITISH NURSES' ASSOCIATION.—H.R.H. the Princess Christian will to-day (Friday) be presented by Sir William Savory, Bart., with the first copy of the first Register of Trained Nurses.

PRESENTATION.—On Wednesday, the 7th inst., Mr. E. Claude Kingsford, L.R.C.P.Lond., M.R.C.S., senior house surgeon, Bolton Infirmary, was presented by the resident officers and nursing staff with a handsome gold watch, suitably inscribed, as a mark of their esteem of, and regret at his resignation after three years, and of gratitude for his kindness.—Dr. Geo. H. Temple, of the Provident Dispensary in connexion with the hospital at Weston-super-Mare, has been presented with a handsome marble timepiece, the spontaneous gift of his patients, in recognition of his kindness and attention to them during his appointment as medical officer to the dispensary.

THE KOCH TREATMENT IN LEPROSY.—The condition of the three lepers recently inoculated at Madrid with Dr. Koch's liquid in the Hospital of St. Jean de Dieu is stated to be satisfactory.

OPEN SPACES.—The Earl of Meath has received the promise of £1000 towards the cost of laying out Victoria Park Cemetery as an open space, provided that the balance of £1300 is forthcoming within the current month, in order that work may be found for the unemployed.

LITERARY INTELLIGENCE.—Swan Sonnenschein and Co. announce the early publication of a new and enlarged edition of Mr. Alfred Haviland's book entitled "The Geographical Distribution of Heart Disease and Dropsy, Cancer in Females, and Phthisis in Females in England and Wales." The work will be illustrated by maps.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The following were successful at the examination for the certificate in Psychological Medicine, held at Bethlem Hospital on Dec. 18th, 1890:—Frederick W. Pilkington, L.R.C.P., M.R.C.S; Robert Hitchings, L.R.C.P., M.R.C.S.; James G. Soutar, M.B., C.M.; Jane B. Henderson, L.R.C.P., L.R.C.S.; Robert S. Black, M.A., M.B., C.M.; John A. Hicks, jun., L.R.C.P., M.R.C.S.

POLLUTION OF RIVERS, WEST SURREY.—The Surrey County Council has arranged for a conference at Newington on the 16th inst. to consider the desirability of formulating a comprehensive scheme for the disposal of the sewage of the towns and districts in the valley of the river Wey. The sanitary authorities in West Surrey interested in the question of the contamination of the Wey have been invited to send representatives.

ALLEGED BABY FARMING.—At Lambeth Police-court on the 2nd inst. a woman was charged with having under her custody and control two boys and four girls, and with having wilfully neglected them. The case had come under the notice of the Society for the Prevention of Cruelty to Children. Dr. Reid of Walworth-road reported that he found all the children in an emaciated condition, and that they appeared to have been grossly neglected. The accused was remanded.

HONOUR TO A MEDICAL STUDENT.—Mr. Cuthbert Rutherford was entertained at a banquet by the citizens of Bedlington, Northumberland, on Monday last, which was presided over by Mr. James Trotter, and was there publicly presented with several cases of medical instruments as a token of the earnestness and ability he had displayed on behalf of many public interests connected with the neighbourhood. In presenting the gift the chairman said that they could not but highly appreciate the keen interest taken by Mr. Rutherford in the education of the people in scientific truth, and admire the uncompromising opposition he offered to complacent orthodoxy wherever it was to be found. Mr. Rutherford has almost completed his curriculum at the Royal Infirmary Medical School, Glasgow, and the public presentation will, no doubt, be much appreciated by his fellow-students.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on January 6th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	263	48	1	62	5	379	442
North-Western Hospital	298	34	..	9	1	342	443
Western ,,	145	16	..	20	1	182	262
South-Western ,,	196	9	..	1	..	206	340
South-Eastern ,,	231	23	..	50	1	305	462
Northern ,,	319	22	..	14	..	355	480
Gore Farm ,,	105	..	..	..	..	105	300
Totals	1557	152	1	156	8	1874	2729

SMALL-POX.—*Atlas* hospital ship, 1.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANNINGSON, BUSHELL, M.D. Camb., M.R.C.S., has been reappointed Medical Officer of Health for the Cambridge Urban District.

BRERETON, JAS. B., L.K.Q.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health for the Gildersome Urban District.

CRESSY, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Warsop Urban Sanitary District of the Mansfield Union.

CROMPTON, A., M.R.C.S., has been appointed Medical Officer for the Benington District of the Boston Union.

CUNNINGHAM, JOHN, M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Royal Burgh of Sanquhar, Dumfriesshire, N.B.

DELAHUNT, JAMES J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of the Ballinasloe District, County Galway.

DRAKE, T. G., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Thornton Urban Sanitary Authority of the North Bierley Union, vice Rawson, deceased.

EDWARDS, B. E. J., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Southowram Urban Sanitary District of the Halifax Union.

GILPIN, F., M.R.C.S., has been appointed Medical Officer of Health for the Rural and Urban Districts of Stratford-on-Avon, Evesham, and Alcester, vice Fosbroke.

GODFREY, G. P., L.R.C.P., L.R.C.S. Edin., has been appointed Visiting House Surgeon to the Mansfield and Mansfield Woodhouse Hospital.

GOSSAGE, A. M., B.A. Oxon., M.R.C.S., L.R.C.P., has been appointed Resident Obstetric Assistant to the Westminster Hospital.

HERRICK, ROBT. W., M.B., B.Ch. Dub., has been appointed Assistant Honorary Surgeon to the Throat and Ear Hospital, Nottingham.

JAMES, G. B., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to Westminster Hospital.

JOHNSTONE, J., L.D.S.R.C.S. Edin., has been appointed Honorary Dental Surgeon to the Throat and Ear Hospital, Nottingham.

KITCHING, J. L. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Mildenhall District of the Mildenhall Union.

KNIGHTS, JAS. W., F.C.S., has been reappointed Public Analyst for Cambridge.

LUNN, P. T., L.S.A., has been appointed Medical Officer of Health for the Launceston Urban Sanitary District of the Launceston Union, vice Brooke.

MUIL, WILLIAM, M.D. Aberd., has been appointed Medical Officer for the Workhouse of the Kirkby Moorside Union.

ODELL, ROBT., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third and Fourth Districts of the Hertford Union, vice T. Odell, resigned.

PENBERTHY, WM., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Central London Sick Asylum District.

PICKWORTH, A. J., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Lakenheath District of the Mildenhall Union.

SHARMAN, ERIC H., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Westminster Hospital.

SHARMAN, MARK, M.B., C.M. Glasg., M.R.C.S., has been appointed Medical Officer for Rickmansworth.

SMITH, J. H., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the Crumpsall (Manchester) Workhouse, vice Fryer, resigned.

SPENCER, WALTER, L.R.C.P., L.R.C.S., has been appointed Medical Officer of Health for the Borough of East Retford, vice William Pritchard, M.D., resigned.

STOKES, J., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the First District of the Ecclesall Bierlow Union, vice Willington, resigned.

STORRS, A., M.D. McGill, Canada, M.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Southport District of the Ormskirk Union.

THOMPSON, E. J., M.R.C.S., has been reappointed Medical Officer for the Twycross District of the Market Bosworth Union.

WILLIS, JULIAN, M.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer to the West Middlesex Waterworks Company, vice W. T. Wyatt, resigned.

WOODHAMS, JOHN A., M.R.C.S., has been appointed Medical Officer of Health for the Rye Urban Sanitary District of the Rye Union, vice Vidler.

WOOD, H. B., M.D. St. And., M.R.C.S., has been reappointed Medical Officer for the Frittenden District of the Cranbrook Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CARLISLE DISPENSARY.—House Surgeon. Salary £130 per annum, with apartments, not board. (Apply to the Honorary Secretary, 14, Bank-street, Carlisle.)

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant for one year. Terms £50 for the first year, and, if reappointed, £70 for the second year, with board, lodging, and washing.

COUNTIES OF STIRLING AND DUMBARTON.—Medical Officer to act for the two counties and their districts. Salary £500 a year, with necessary travelling expenses, to be regulated by the County Councils. (Apply to Mr. Welsh, County Clerk, Stirling, or Mr. Babtie County Clerk, Dumbarton.)

COUNTY BOROUGH OF ST. HELENS.—Assistant to the Medical Officer. Salary £200 per annum. (Apply to the Town Clerk, Town Hall, St. Helens.)

COUNTY COUNCIL OF AYRSHIRE.—County Medical Officer. Salary at the rate of £450 a year. Expenses will be paid as they may be vouched and passed. (Apply to the County Clerk, County Buildings, AYR.)

COUNTY OF DUMFRIES.—Medical Officer for the County. Salary £300 per annum. He will receive the outlays necessarily incurred in the discharge of his duties. (Apply to Mr. Robson, County Clerk, Dumfries.)

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

GERMAN HOSPITAL, Dalston.—Honorary Assistant Physician.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. House Physicians.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE INFIRMARY.—Senior House Surgeon. Salary £60 per annum, rising to £70, with board and residence.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser (one office). Salary £50 per annum, with board, lodging, and washing.

LANCASHIRE COUNTY ASYLUM, Rainham, near Liverpool.—Pathological Assistant Medical Officer. Salary £200 per annum, with furnished apartments, board, attendance, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, E.—Dental Surgeon.

PARISHES OF KIRKBEAN AND COLVEND AND SOUTHWICK.—Medical Officer. Salary £50, together with dwelling-house free. (Apply to Mr. James McLelland, Inspector of Poor, Colvend-by-Dalbeattie.)

STOCKPORT INFIRMARY.—Qualified Assistant to the House Surgeon for six months, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

MILLS.—On Dec. 16th, at Meerut, N.W.P., India, the wife of B. Langley Mills, F.R.C.S., Army Medical Staff, of a son.

MOORE.—On Dec. 3rd, at Stony Hill, St. Andrew, Jamaica, the wife of York T. G. Moore, L.R.C.P. Ed., M.R.C.S., of a son.

PENNY.—On Jan. 3rd, at Morton House, Halliford-street, N., the wife of William Lowry Penny, M.D. Cantab., M.R.C.S.E., of a son.

MARRIAGES.

DAWSON—SCOTT.—On Jan. 1st, at Redcar, by the Rev. James Wallace, M.A., Alfred Stanhope Dawson, L.R.C.P. & L.R.C.S. Edin., of Castlegate House, Cockermouth, to Helen Paton Scott, eldest daughter of Andrew Scott, of Coatham, Yorkshire.

FOX—HAY-NEWTON.—On Jan. 1st, at St. Barnabas, Pimlico, by the Rev. Alfred Fox, brother of the bridegroom, Thomas Colcott Fox, B.A. Cantab., M.B. Lond., M.R.C.P., of 14, Harley-street, to Ida Mary, youngest daughter of the late J. S. Hay-Newton, Esq., of Newton Hall, Haddington, N.B.

JACKSON—BENNETT.—On Jan. 1st, at St. Stephen's, Clapham-park, by the Rev. M. O. Fitzmaurice, Basil Frederic Forrester Jackson, M.R.C.S.E., L.R.C.P., son of the late Geo. Frederick Jackson, Esq., solicitor, of Plymouth, to Kate, only daughter of the late William Bennett, Member of the Institute of Painters in Water Colours, of Clapham-park.

LENOX-CONYNGHAM—BRADSHAW.—On Nov. 15th, at Christ Church, Rawal Pindi, Punjab, by the Rev. A. Spens, Chaplain of Rawal Pindi, assisted by the Rev. C. Gillmore, Chaplain of Karachi, Gerald Ponsonby, Royal Engineers, fifth son of Colonel Sir William F. Lenox-Conyngham, K.C.B., of Spring Hill, co. Derry, Ireland, to Elsie Margaret, eldest daughter of Deputy Surgeon-General A. F. Bradshaw, Army Medical Staff.

LIPSCOMB—HANDY.—On Nov. 24th, at Chertsey, by the Rev. Canon Pattenden, A. A. Lipscomb, M.R.C.S., son of the late J. K. Lipscomb, M.R.C.S., Alresford, Hants, to Mary, daughter of John Handy, of Shipton, Gloucestershire.

DEATHS.

ANDERSON.—On Jan. 3rd, at Leamington-road Villas, Westbourne-park W., James Anderson, M.D., Retired Inspector-General of Hospitals Calcutta, in his 79th year.

BELLAMY.—On Jan. 4th, at Wimpole-street, Cavendish-square, Edward Bellamy, F.R.C.S., aged 48.

BURT.—On Dec. 31st, at his residence, The Roses, Warren-road, Bexleyheath, Kent, John J. K. Burt, aged 84.

CRAWFORD.—On Jan. 4th, at Drayton-green-road, Ealing, Dr. Cooper Hayes Crawford, Surgeon-Major North Stafford Militia, aged 63.

DUNCAN.—On Jan. 4th, Bartholomew Arcedeckne Duncan, M.D., M.R.C.P., of 20, Wimpole-street, aged 62.

MARSHALL.—On Jan. 1st, at Belle Vue House, Cheyne-walk, Professor John Marshall, F.R.S., President of the General Medical Council, aged 72.

MOORE.—On Jan. 3rd, at Roseneath, West Kirby, Dr. Moore, late Canning-street, Liverpool, aged 77.

RUGG.—On Jan. 2nd, at 1, Grove-road, St. John's-wood, Henry Hodson Rugg, M.R.C.S., in his 79th year.

STRANGE.—On Jan. 5th, at Worcester, William Strange, M.D., L.R.C.P. Edin., aged 75.

TAYLOR.—On Dec. 29th, at Sutton Coldfield, Thos. Taylor, F.R.C.S. Eng., aged 96.

THOMAS.—On Jan. 6th, at Great George-street, Liverpool, Hugh Owen Thomas, M.D. St. Louis, M.R.C.S., aged 57.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, January 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. Marcus Gunn: External Examination of the Eye.—London Throat Hospital, Gt. Portland-street: 8 P.M., Mr. W. R. H. Stewart: The Examination of Ear Cases.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Annual General Meeting. Election of Officers. Casual Communications by Messrs. S. J. Hutchinson, C. Robbins, C. F. Rilot, W. H. Woodruff, F. J. Colyer, Browne Mason, Storer Bennett, and others. Valedictory Address by the President.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. William Duncan: Chronic Disease of the Uterine Appendages, with Short Notes of Thirty Consecutive Cases treated by Abdominal Section.—Mr. Alban Doran: The Treatment of Chronic Disease of the Uterine Appendages.

Tuesday, January 13.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Hypochondriasis and Melancholia.—Examination Hall: Mr. Hutchinson on the Nature of Lupus in special reference to its connexion with Tuberculosis.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. R. Clement Lucas: On a case of Nephro-lithotomy (following Nephrectomy) for Total Suppression of Urine lasting five days; complete recovery and good health five years after the operation.—Mr. Rickman J. Godlee: Removal of large Calculi, first from one kidney and afterwards from the other; death from Hæmorrhage after the second operation.

Wednesday, January 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: The Treatment of Cough.

HUNTERIAN SOCIETY.—8 P.M. Mr. Symonds: Three cases of Hydronephrosis, and their treatment.—Dr. E. G. Gilbert: Some Remarks on Colds.—Dr. G. N. Pitt: Tubercular Lesions in Alcoholics.

SOCIETY OF ARTS.—8 P.M. Mr. J. F. Green: Steam Lifeboats.

Thursday, January 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

HARVEIAN SOCIETY OF LONDON.—Address by the retiring President, Mr. T. Bryant.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Howard Tooth: The Anatomy of the Spinal Cord.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. Voelcker: Demonstration of Pathological Specimens.—London Throat Hospital, Great Portland-street: 8 P.M., Dr. Ed. Law: The Examination of the Throat and Nose.

Friday, January 16.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: The Treatment of Hæmoptysis.

Saturday, January 17.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: Erythema and Allied Affections.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 8th, 1891.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Jan.	2	30·22	S.E.	31	..	..	35	29	..	Foggy
,,	3	30·27	S.E.	31	..	..	40	29	..	Foggy
,,	4	30·07	W.	39	38	..	40	31	·11	Cloudy
,,	5	30·17	N.W.	32	..	53	38	31	..	Cloudy
,,	6	30·37	N.	28	..	42	33	27	..	Cloudy
,,	7	30·29	N.	24	..	46	34	27	..	Cloudy
,,	8	30·04	N.W.	31	..	36	33	27	·08	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—The question of the qualified assistant and the unqualified assistant, or, in other words, the dispenser who poses as a medical practitioner, I think does not receive anything like a due amount of attention from the profession generally. We hear much about the "hard times" we are having; but do we hear enough about the causes which produce these results? I maintain that the unqualified assistant is largely responsible for the low opinion which is beginning to be held by the public in some quarters of those on whom devolves the duty of upholding the dignity of our calling; for (I speak from hearsay) is it not hinted at that he is frequently to be found in the bar parlour of his district, the centre of an admiring throng, who like to talk to the "doctor"? And who scans with so critical an eye the failings of other practitioners, who, forsooth, think that they "know their work" because they happen to have a diploma or so? Then his record of midwifery cases always going on towards four figures; his easy method of performing version, and the dexterity with which he handles the forceps, would, I fear, arouse the envy of some of our leading obstetricians, if they had the advantage of his acquaintance. Again, without the unqualified assistant the sixpenny dispensary would not pay so well; for the young qualified man, possibly through mistaken pride, is not eager to assist in these enterprises, most of which require the aid of one or more assistants, as is obvious when one considers the amount of work which would be required in order to make even a moderate income. The writer knows of an instance where, in a mining

district, an average of from twenty to thirty visits a day was kept up by an unqualified man who managed a branch (chiefly club) practice, and who had sole charge of the consulting-room each evening. I have reason to know positively of this, because I attempted to oppose the man in question, but was ignominiously defeated by him, he being my senior in years, and possessing that bland and persuasive manner which so easily enables a man to hold his own if he has an introduction, simply because it is not guessed at that he is anything other than that which he represents himself to be. At all events, the result is that, in spite of an appeal to the Medical Council, I remain,

January, 1891. A QUALIFIED ASSISTANT.

To the Editors of THE LANCET.

SIRS,—It is indeed time the cause of the poor overworked unqualified assistant was taken up. No wonder medical men find it a difficulty to obtain the services of qualified assistants. They will not work for next to nothing, as the unqualified man of to-day does. No wonder, then, that unqualified men never qualify or do any good. I will endeavour to give you briefly an account of my experiences as an unqualified assistant. I have been in the noble position for ten years. It has been hard work, and night work, too, £25 a year, and, worst of all, no time for any kind of study. I am a registered medical student, licentiate in midwifery, and assistant of Apothecaries' Hall, Dublin. Your readers will say, "How did you get time to go to Dublin for the six months' practice for the Coombe, &c. Did your employer give you a holiday"? No. I had to leave my employer each time I wanted to work for examination. My experience is this: the more you serve your principal, the longer you remain unqualified. If you are taken ill whilst in the employment of a medical man, out you go. Medical men never consider the unqualified assistant is the mainstay of the practice. After a ten years' life of this kind, one finds he is getting less active, and consequently is discharged for being lazy, and then nothing more is heard. Perhaps the poor honest assistant dies in the workhouse. The sooner something is done to help us the better. I see the servants' cause is being taken up. If unqualified men were allowed in for the respective examinations on producing certificates of ten years' practice, they would be able to share the practice of the many grasping, ungrateful principals. I am, Sirs, yours obediently,

January, 1891. E. POOLEY, L.M.Ch. Dub.

To the Editors of THE LANCET.

SIRS,—"G. P.," in a letter published in your last issue, brings forward a very important matter—viz., the employment of unqualified assistants, and the failure of the General Medical Council in laying down some law on the subject. I quite agree with your correspondent on this point, and suggest that the following be the law:—"Every medical practitioner to display, either on his door-plate or in a conspicuous place in his waiting-room, the names and qualifications of himself and all his assistants. If anyone of the above be unqualified, he should have 'unqualified to practise medicine, surgery, midwifery' (any or all, as the case may be) in bold type after his name." The practice at present is for the practitioner to hold out his unqualified assistant as qualified, and always speak of and to him as "doctor." This is nothing short of a fraud on the public and obtaining money under false pretences. This disgrace and scandal to the profession should not be allowed to continue. I have no objection to the employment of unqualified men if patients knew them to be such. Every coroner will bear me out in the statement that a frequent complaint of surviving relatives is: "Dr. ——'s assistant attended the deceased. We believed him to be a doctor, and only now find that he is not."

I am, Sirs, yours truly,

Nov. 5th, 1890. X. Y. Z.

MEDICAL ADVERTISING BY MEN OF MANY TITLES.

THE following is a striking illustration of the fact that many and even respectable titles do not always hinder a medical man from pushing practice by advertising. The physician and surgeon, it will be seen, boasts of no less than seventeen letters of title.

> The National Dispensary, conducted by Dr. R. H. Foot (A.B., M.B., M.D., L.R.C.S.I., L.M.C.R.S.I.), physician and surgeon, who resides on the premises. Dispensary Patients—Hours of attendance: Mornings, 9 to 11; Evenings, 6 to 8. Sundays, 11 to 12 A.M., and 7 to 8 P.M. Advice and Medicine for one week, 1*s.* If Visited at their own Homes, 3*s.* per week. Midwifery from 10*s.* 6*d.* At home to Private Patients until 12 A.M. and after 6 P.M. Removed from 10, Whimple-street to 29, Flora-street, Plymouth.

Public Vaccinator.—The Sanitary Council of Paris, in view of the outbreak of small-pox in the south, have issued a code of instructions to be hung up in dispensaries and other public places. Vaccination and revaccination are chiefly relied upon as a means of combating the disease, but isolation and disinfection are not overlooked.

Assistant.—Our correspondent should consult his solicitor. We presume damages and costs would be consequential, and possibly there might be an injunction from the High Court, to be followed by imprisonment in case of disobedience.

S. C. has not enclosed his card.

THE ODDFELLOWS OF SANDBACH.

THE *Nantwich Guardian* reports the proceedings at the annual dinner of the Loyal Faithful Lodge of Sandbach. The chairman very properly magnified the Order, and said that it had 700,000 members, and that it and similar societies had done more for England than Free Trade. In response to the toast of his health, Dr. Rice expressed satisfaction with a recent change in the medical arrangements by which three medical officers had been appointed to the lodge, so as to give the members a choice. This seems to us an example that may well be followed by large friendly societies. Dr. Rice finished his speech by a remark in more doubtful taste—viz., by expressing his readiness to attend "any number of members connected with any society in Sandbach for the ordinary club pay." In the light of his previous remarks we can believe that this was said in a somewhat playful spirit; but there was an air of business about his words which might take effect on the patients of other medical men.

Mr. William Wallace.—The date of the death of Mr. Peter Marshall, F.R.C.S., was March 12th, 1877, and an obituary notice of that gentleman will be found in THE LANCET of April 7th of that year.

Tyro will find all the information he needs in our last Students' Number, published September 6th, 1890.

Mr. Chittenden (Gravesend).—Dr. Fothergill died in the summer of 1888.

STAMMERING.

To the Editors of THE LANCET.

SIRS,—A gentleman asked in a recent issue of THE LANCET for help in the treatment of stammering. The chief points are: (1) Seek for peripheric points of irritation and remove them, defective teeth, adenoids, polypes, hypertrophied tonsils, worms, phimotic adhesions, &c.; (2) forbid the nervines; (3) educate the breathing; (4) teach the subject to completely compose a sentence before commencing; (5) after taking a long breath, close the mouth, press the tongue up to the palate, throw open the mouth widely, and quickly close the lips again; (6) if the lower jaw cannot be protruded, electrify the internal pterygoid muscles; (7) practise in French, as it is a language demanding great lip play, very defective in most cases. If this gentleman would pay me a visit any morning I shall be most pleased to practically demonstrate all these manœuvres in a friendly way.

I am, Sirs, yours faithfully,

EDWARD BLAKE, M.D.

Berkeley Mansions, Hyde-park, Dec. 15th, 1890.

A NEW VENETIAN BLIND.

MR. FREDERICK ENGELBACH, L.R.C.P., of Moreton-Hampstead, Devon, has invented an improvement of the Venetian blind, by which the webbing, ladders, and supports are replaced by chains and wire transverse supports hooked into the chains. The blind thus constructed is much more free from dirt than when webbing is used, and the damage from which the webbing suffers owing to exposure to the sun is avoided. Mr. Engelbach's blind is therefore more cleanly, more durable, and is, moreover, more elegant in appearance, and is especially well adapted for public institutions, where it is important that labour should be saved.

Sanitarian.—The matter has not escaped our attention, but there are some points which require elucidation.

G. P. is referred to THE LANCET of last week, on page 68 of which he will find an answer to his question.

Mr. G. A. Wright.—The paper has been received, and is marked for insertion.

Students should represent his case to the Secretary of the College.

General Practitioner should send us the original card.

THE INFLUENZA.

To the Editors of THE LANCET.

SIRS,—I think it probable that the outbreak of influenza which has afflicted the world in 1890 will be traced in all its curious wanderings by those whose duty it is to compile a careful record. May I, then, contribute the following item?

I have a letter to-day from Consul John Buchanan, C.M.G., who lives on Mount Zomba, upon the Shiré Highlands of Central Africa—our new Protectorate. He writes on Oct. 11th—about the hottest time of year—that he has had a very severe attack of influenza combined with fever. "Central Africa is," he says, "about the last place on earth where one would expect to meet with influenza, but it has been a most severe epidemic here. A good many people have died, both young and old. Most of the Europeans at Blantyre have had it in a less or more severe form."

I am, Sirs, yours faithfully,

Twywell Rectory, Dec. 30th, 1890. HORACE WALLER, F.R.G.S.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir W. Foster, Birmingham; Dr. Steavenson, London; Dr. Eddowes; Mr. Symonds, Oxford; Mr. J. Hutchinson, London; Dr. Arthur; Sir F. Leighton, London; Dr. J. Mackenzie, London; Mr. S. J. Campbell; Dr. Sykes, London; Dr. Littlejohn, Edinburgh; Mr. Pitts, London; Mr. Butler-Smythe, London; Dr. F. Hewitt, London; Mr. J. Toppin, Pernambuco; Dr. Stalker, Dundee; Mr. T. Bryant, London; Dr. Wheaten, London; Dr. S. Mackenzie, London; Mr. C. Higgens; Dr. Fletcher Beach, Dartford; Surgeon-Major Lawrie, Hyderabad; Dr. Cranstoun Charles, London; Mr. Haviland, Douglas, I.M.; Professor Mayo Robson, Leeds; Dr. F. Little; Dr. J. B. Ball, London; Mr. Mayo Collier, London; Mr. H. P. Hawkins, London; Messrs. Pease, Son, and Co., Darlington; Mr. Litchfield; Messrs. Mabane and Graham, South Shields; Mr. Pooley, Frodsham; Mr. Power, Cork; Messrs. Austin and Son, Bristol; Mr. Jno. Spring, Grimsby; Messrs. Barker and Son, London; Mr. Thompson, Welbeck-street; Messrs. Keith and Co., Edinburgh; Mr. Pringle, Notting-hill; Mr. Milton, Leicester-square; Mr. C. Besley, Waltham; Mr. Lewis, London; Mr. Hustell, Carlisle; Mr. Oliver, Doncaster; Mr. Andrew, Stockport; Mr. F. B. Jessett, London; Mrs. Levick, Paris; Mr. Jeeves, St. Helens; Mr. W. Mathew, Clifton; Mr. Hornibrook, London; Mr. Powell, Bournemouth; Dr. Delépine, London; Messrs. C. Griffin and Co., London; Dr. Tomkins, Leicester; Mr. H. A. Reeves, London; Messrs. Severn and Grün, London; Mr. Lunn, Ladbroke Grove; Messrs. Maclehose and Sons, Glasgow; Dr. B. W. Stone, Hopkinsville, Ky.; Messrs. Brady and Martin, Newcastle; Dr. A. Yule, London; Dott. P. Sonsino, San Lorenzo; Dr. M. Murray, London; Mr. Shawe; Messrs. Richardson and Co., Leicester; Dr. Crooke, Birmingham; Messrs. Watkins and Osmond, London; Mr. G. A. Wright, Manchester; Messrs. Savory and Moore, London; Mr. J. P. Richards, Hanwell; Messrs. Blondeau et Cie, London; Mrs. Cunningham, Scarborough; Messrs. D. Currie and Co., London; Dr. Johnstone, co. Kilkenny; Messrs. Gallais and Co., London; Mr. Warburton, Treherbert; Messrs. Woolley, Sons, and Co., Manchester; Dr. Calder, Queensland, N.S.W.; Messrs. Keene and Co., London; Dr. Appleton, Cornwall; Messrs. White, Druce, and Brown, London; Mr. Warner, Sheffield; Dott. S. Di Giorgi, Mazzara del Vallo; Mr. Griffin, Bath; Mr. Bigg, London; Messrs. Kent and Co., Grimsby; Mr. Hendry, Eastbourne; Messrs. Howard, Lloyd, and Co., Leicester; Surgeon-Major Notter, Southampton; Messrs. Dodd and Co., London; Mr. McLelland, Dalbeattie, N.B.; Messrs. Cowie and Co., London; Mr. Muthusawny, Madras; Messrs. Street and Co., London; Dr. Mitra, India; Mr. Hugo, Reading; Mr. Wiggins, Rotherhithe; Mr. Waters, London; Dr. Harris, London; Mr. Read, Canterbury; Mr. Darke, London; Mr. Hyde, London; Mr. Teague, Manchester; Mr. Atkins, Kilburn; Mr. Lucas, Cambridge; Dr. Hall, Brighton; Dr. Cripps, London; Mr. Stanford, London; Mr. Coghill, Birmingham; Miss Zimpel, London; M. Welter, Paris; Mr. Keay, Eastbourne; Dr. Calwell, Belfast; Mr. Laver, Sheffield; Mr. Crow, Canterbury; Messrs. Johnston, Edinburgh; Miss Armstrong, Ventnor; Mr. MacAlister, London; Mr. Hart, London; Mr. Thomlinson, Partick; Mr. Blair, Leeds; Mr. Edwards, Peterborough; Dr. White, Sheffield; Mr. Armstrong, Newcastle-on-Tyne; Dr. O'Conor, Buenos Ayres; Mr. Williams, Swansea; J. T., S. G.; *Mercury* Office, Leeds; B. S. R.; X. Y. Z.; A. B., Queen-square; Maltine Manufacturing Co., Bloomsbury; W. N., London; J. B., London; Assistant; Nurse Lloyd, Camborne; Medicus, Sheffield; May, London; A Qualified Assistant.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Ogle, London; Mr. Tully, Hastings; Mr. Mason, Newark; Messrs. Lee and Martin, Birmingham; Dr. Owen, Gloucestershire; Messrs. Bailly and Coates, London; Mr. Griffith, Carnforth; Messrs. Hargreaves and Son, Preston; Mr. Greville, Devon; Dr. Hocken, Dunedin, New Zealand; Dr. Langyer, Zurich; Mr. Ley, London; Mr. Powell, South Wales; Mr. Shaw, Bombay; Dr. Shepherd, Usk; Mr. Webb, Ponder's End; Mr. Aspinall, Cheshire; Mr. Low, Orkney; Messrs. Hooper and Co., London; Messrs. Ralli Bros., Manchester; Dr. Lee, New South Wales; Mr. Trombetta, Messina; Dr. Howe, Croston; Dr. Rake, Guy's Hospital; Dr. Dripple, Suffolk; Mr. Cant, Lincoln; Dr. Nelson, New Zealand; Dr. Hazleton, Walton-on-the-Naze; Mr. Taylor, Surbiton Hill; Mr. Settle, Yorkshire; Mr. Evans, Radnor; Dr. McLeod, New South Wales; Rev. Mr. Cleveland, Selby; Mrs. Faithful, Wimbledon park; Mr. Harding, Loughborough; Mr. Cox, Southport; Mr. Dyer, Ilfracombe; Mr. Westmoreland, Manchester; Mr. Medcalfe, Clapham; Dr. Mitchell, Taunton; Mr. McMahon, Cork; Mr. Stenhouse, Glasgow; Dr. Sheppard, London; Mr. Oliver, Doncaster; Mr. Miller, Dartmouth; Mr. Fielden, Belfast; Dr. Ritchie, Otley; Mr. Dawson, Cockermouth; Mr. Stilliard, Birmingham; Mr. Tyte, Minchinhampton; Mr. Lockwood, Allerton; Mr. Gillingham, Chard; Mr. O'Meara, Leicester; Mr. Smith, London; Mr. Gray, Shrewsbury; Mr. Stone, Manchester; Dr. Sharp, Walsall; Mr. Jones, Shropshire; Mr. Lee, Bristol; Dr. Deeley, Blackpool; Dr. Morison, Hartlepool; Mr. Denby, Bradford; Mr. Wallace, Glasgow; Dr. Stewart, Cornwall; Dr. Kelso, Alloa, N.B.; Mr. Stretton, Kidderminster; Surgeon-Major Bradshaw, Punjab; Mr. Hammett, Taunton; M. Boranni, Paris; Mr. Murrell, Manchester; Mr. Edwards, Peterborough; Mr. Lipscombe, Stratford; Mr. Brettell, Dudley; Mrs. Sutton, London; Messrs. Condy and Mitchell, London; Mr. Heywood, Manchester; Messrs. White and Co., Brook-street; Dr. Stanley, Sheffield; Dr. Galbraith, Great Yarmouth; Mr. East, London; Mrs. Merlin, Ely; Mr. Robson, South Shields; Dr. Macnab, Portree; Mr. Beckton; Dr. Griffith, Milford Haven; Mr. Morris, Basingstoke; R. M., London; Oldfield, Ventnor; Alpha, Birmingham; Chemist, London; Forceps, London; Flintshire Dispensary; Alpha, London; Surgeon, Manchester; Clerk, St. Asaph Union; Medicus, Sheffield; Omega, Leeds; X. B., London; Lady Superintendent, Bath; X., Enfield; Alienist; National Orthopædic Hospital, London; Mason, London; Solicitor, London; B. M. T. A., London; Dowker, London; Assistant, London; Medicus, Ormskirk; M.B., Loughborough; Lancet, London; Midlands, London; Elder, London; E. J., Tring; Beta, London; S. L., London; A. B. C., South Norwood; A. B. C., London; M. H., London; W. X., London; Vicar, London.

NEWSPAPERS,—*Daily Columbian (New Westminster, B.C.), Manchester Examiner, Irish Times, Sussex Daily News, Western Mercury, Local Government Chronicle, Scotsman, Leicester Daily Post, Windsor and Eton Gazette, Bristol Mercury, Dundee Advertiser, Yorkshire Post, City Press, National Bulletin, Mining Journal, Reading Mercury, Liverpool Daily Post, Newcastle Chronicle, Birmingham Post, Public Health, South Africa, Electrical Engineer, Windsor and Eton Express, Architect, Surrey Advertiser, Isle of Man Times, Spectator, Suffolk Times, Chemist and Druggist, Pharmaceutical Gazette, Evening News and Post, East Kent Gazette, Malta Chronicle, Nantwich Guardian, Bombay Gazette, Law Journal, Liverpool Courier, Paternoster Review, Times of India, The Schoolmaster, South Wales Daily News, &c.*, have been received.

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